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VOLUME XIV NUMBER FIVE

WESTERN ARTS ASSOCIATION BULLETIN

THIRTY-SIXTH ANNUAL REPORT

A RECORD OF THE
CONVENTION AT
MINNEAPOLIS,
MINNESOTA
MAY 6, 7, 8, 9
1930

PUBLISHED AT INDIANAPOLIS, INDIANA

VOLUME XIV NUMBER FIVE

Western Arts Association Bulletin

THIRTY-SIXTH ANNUAL REPORT AND YEAR BOOK

1930

REPORT OF THE MINNEAPOLIS CONVENTION

HARRY E. WOOD, *Secretary*
5215 College Avenue
Indianapolis, Indiana

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Western Arts Association

Officers, 1929-1930



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Lakewood, Ohio



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Iowa State Teachers College
2500 College Street
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Western Arts Association

Council, Standing Committees, and Chairmen

1929-1930

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University of Minnesota
Minneapolis, Minnesota

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Associate Professor of Art
University of Minnesota
Minneapolis, Minnesota

RUTH SEGOLSON
Instructor of Home Economics
University of Minnesota
Minneapolis, Minnesota

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Department of Vocational Education
Cleveland, Ohio

OTTO E. EGE
Cleveland School of Art
Cleveland, Ohio

SECTION CHAIRMEN

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MANUAL TRAINING

W. B. JOHNSTON
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HOME ECONOMICS

HAZEL P. ROACH
Supervisor Home Economics
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ELMER W. CHRISTY
Director of Industrial Arts
216 East Ninth Street
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Dunwoody Institute
Minneapolis, Minnesota

Western Arts Association

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SECTION CHAIRMEN

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Supervisor of Art
Curtis Hotel
Minneapolis, Minnesota

MANUAL TRAINING AND VOCATIONAL EDUCATION
GEORGE C. DONSON
Supervisor of Manual Arts
18 Wilson Avenue
Washington, Pennsylvania

PRINTING
L. L. GORE
Instructor of Printing
Box 252, Peabody College
Nashville, Tennessee

HOME ECONOMICS
Not Yet Appointed

PROGRAM

of the

THIRTY-SIXTH ANNUAL CONVENTION

of the

WESTERN ARTS ASSOCIATION

MAY 6-7-8-9, 1930

Minneapolis, Minnesota

General Theme of the Convention

"Adjusting the Arts to Modern Education"

OFFICIAL OPENING

TUESDAY MORNING, MAY 6

EIGHT-THIRTY O'CLOCK

Opening of Registration Desk, Mezzanine Floor, Leamington Hotel
Filing of Railroad Certificates

NINE O'CLOCK

OPENING OF EXHIBITS—Material and Equipment Exhibits, Leamington Hotel

School Exhibits, lobby of the Leamington Hotel

St. Paul School Exhibits, St. Paul Public Library

Exhibits will remain open from 9 A. M. to 6 P. M. excepting Thursday when they will close at 5:30 P. M.

Visiting Schools. Visiting lists and information regarding location of schools may be had at the convention information desk, Leamington Hotel

TUESDAY AFTERNOON, MAY 6

TWO O'CLOCK

SECTION MEETINGS

ART SECTION—Ball Room, Curtis Hotel

Jean Corser, Chairman, Director of Art, Cleveland Heights, Ohio

Topic: **"Stagecraft Under Limitations"**

Professor S. Chatwood Burton, Department of Art, University of Minnesota

Topic: **"Interpretive Dances"**

Helen Norby, University of Minnesota

Topic: **"Marionettes, Masks and Shadows" (Illustrated)**

Mrs. Winifred H. Mills, Fairmount Junior High School, Cleveland, Ohio

TUESDAY AFTERNOON, MAY 6

TWO O'CLOCK

HOME ECONOMICS SECTION — Ball Room, Leamington Hotel

Hazel P. Roach, Chairman, Supervisor Home Economics, Grand Rapids, Michigan

Topic: **"Problems and Standards in Modern Art Teaching"**

Evelyn Metzer, Head of Applied Art, Kansas State Teachers College

Topic: **"The Development of Appreciation Related to the Modern Home"**

Joanne M. Hansen, Head of Art Department, Iowa State College

TUESDAY AFTERNOON, MAY 6

TWO O'CLOCK

VOCATIONAL EDUCATION SECTION—East Ball Room, Curtis Hotel

Elmer W. Christy, Chairman, Director of Industrial Arts, Cincinnati, Ohio

Topic: **"Vocational Training for Girls in Minnesota"**

Agnes R. Crounse, Girls Vocational School, Minneapolis, Minnesota

Topic: **"The Dunwoody Industrial Institute"**

R. T. Craigo, Acting Director, The William Hood Dunwoody Industrial Institute, Minneapolis, Minnesota

Topic: **"Mechanical Ability Tests"**

Professor Donald G. Paterson, University of Minnesota

TUESDAY AFTERNOON, MAY 6

TWO O'CLOCK

MANUAL TRAINING SECTION—Sun Room, Curtis Hotel

W. B. Johnston, Chairman, Teacher Industrial Arts, Cincinnati, Ohio

Topic: **"The Significance of the General Shop in Adjusting the Arts to Modern Education"**

S. L. Coover, Director of Industrial Arts Education, Beaver Falls Public Schools, Beaver Falls, Pennsylvania

Topic: **"Methods and Content in Teaching Drawing"**

Walter W. Sturtevant, South High School, Minneapolis, Minnesota

Topic: **"Industrial Arts as Part of General Education"**

Dean M. Schweickhard, State Supervisor of Trade and Industrial Education, Minnesota

TUESDAY AFTERNOON, MAY 6

TWO O'CLOCK

PRINTING SECTION—Blue Room, Leamington Hotel

Fred Landon, Chairman, Dunwoody Institute, Minneapolis, Minnesota

Topic: **"Printing and Art Education"**

E. E. Sheldon, The Lakeside Press, R. R. Donnelley & Sons, Chicago

Topic: **"The Making of a Halftone"**

E. P. Drummond, Freeman-Gross Engraving Co., Minneapolis

TUESDAY EVENING, MAY 6

SEVEN FORTY-FIVE O'CLOCK

GENERAL SESSION

BALL ROOM, LEAMINGTON HOTEL

CALL TO ORDER—Bess Eleanor Foster, Acting Advisory Chairman of the Local Committee

ADDRESS OF WELCOME—Carroll R. Reed, Superintendent of Schools, Minneapolis, Minnesota

PRESIDENT'S ADDRESS—J. H. McCloskey, Director of Technical Work, Lakewood Schools, Lakewood, Ohio

ADDRESS—**"Education and the New World"**

Dr. M. E. Haggarty, Dean of Education, University of Minnesota

TUESDAY EVENING, MAY 6

NINE-THIRTY O'CLOCK

BALL ROOM, CURTIS HOTEL

Informal Dance and Get Acquainted Meeting—Compliments of the "Ship." Admission by membership badge.

WEDNESDAY MORNING, MAY 7

NINE-THIRTY O'CLOCK

GENERAL SESSION

BALL ROOM, CURTIS HOTEL

J. H. McCloskey, President Western Arts Association, Presiding

MUSIC—Pipe Organ

ADDRESS—**"Art As a Factor in the Modern Curriculum"** (Illustrated)

Esther W. Wuest, Director of Art, Portland, Oregon

REPORT of the Committee on Terminology

Bess Eleanor Foster, Director of Art, Minneapolis

ADDRESS—**"The Pressure of Modern Educational Teaching Requirements in Relation to Art Courses Leading to University Degrees"**

William H. Varnum, in Charge of Courses in Applied Arts, University of Wisconsin

WEDNESDAY, MAY 7

TWELVE O'CLOCK NOON

Curtis Hotel

THE 21ST ANNUAL LUNCHEON OF THE WESTERN PRATT ALUMNI ASSOCIATION

$1.25 Per Plate

WEDNESDAY AFTERNOON, MAY 7

ONE-THIRTY O'CLOCK

Bus trip to St. Paul by way of the State Capitol, with a stop at the St. Paul Library where an exhibit will be held under the auspices of the St. Paul Institute. Tea will be served from 3:00 to 5:00 P. M. by the St. Paul Public School Art Club.

WEDNESDAY AFTERNOON, MAY 7

TWO O'CLOCK

Visit to Dunwoody Institute

TWO O'CLOCK

Visit to Walker Gallery

WEDNESDAY EVENING, MAY 7

The galleries of the Minneapolis Institute of Arts will be open from 7:00 to 8:00 o'clock.

GENERAL SESSION

Auditorium, Minneapolis Institute of Arts

J. H. McCloskey, President Western Arts Association, Presiding

MUSIC—

ADDRESS—**"Applied Modernism"**

Edward W. Mathews, Instructor in Industrial Design, The Academy of Fine Arts; Designer with C. A. Everson & Co., Manufacturers of Lighting Fixtures, Chicago, Illinois

ADDRESS—**"Adjusting Art Education to Modern Life Through Home Decoration, Dress, Industry, and Amusement"**

Frank Alvah Parsons, President New York School of Fine and Applied Arts

THURSDAY MORNING, MAY 8

NINE-THIRTY O'CLOCK

SECTION MEETINGS

JOINT SECTION — ART AND MANUAL TRAINING — Ball Room, Curtis Hotel

Jean Corser, W. B. Johnston, Chairmen

Topic: **"Design in Relation to Industrial Art"**

Alfred Howell, Professor of Art, Western Reserve University, Cleveland, Ohio

Topic: **"Relationship of Modern Art in Industry to Teaching"**

Edward W. Mathews, Instructor in Industrial Design, The Academy of Fine Arts; Designer with C. A. Everson & Co., Manufacturers of Lighting Fixtures, Chicago, Illinois

THURSDAY MORNING, MAY 8

NINE O'CLOCK

JOINT SECTION—HOME ECONOMICS AND ART—Ball Room, Leamington Hotel

Topic: **"Our Common Ground"**

Esther W. Wuest, Director of Art, Portland, Oregon

Topic: **"Art, Home Economics and Modernism"**

Frank Alvah Parsons, President New York School of Fine and Applied Arts

THURSDAY NOON, MAY 8

LUNCHEON—Former Bradley students and alumni. $1.00 per plate. Tickets at registration desk.

SPECIAL LUNCHEONS—To be announced. See bulletin board at registration desk.

THURSDAY AFTERNOON, MAY 8

ONE-THIRTY O'CLOCK

Free trip around the Minneapolis Lakes and Boulevards, reaching the University of Minnesota at 3:30, at which time there will be the privilege of hearing a lecture by the noted artist and teacher, Herr Hoffman of Munich, Germany. This opportunity comes through the courtesy of the University of Minnesota. Herr Hoffman has been brought to this country by the University of California, where he is to instruct during the 1930 Summer Session.

Cars furnished by courtesy Minneapolis Parent Teacher Council, Mrs. Robert E. McDonald in charge.

THURSDAY EVENING, MAY 8

SIX O'CLOCK

Ball Room, Leamington Hotel

WARTS EN ROUTE—A tour to write home about. You can't afford to miss the **Dinner and Dance.** All real WARTS will assemble at the Leamington Hotel. Dinner at 6:00 P. M. followed by "Warts Enroute." And for the dance—the incomparable Eddie Dunstedter and his orchestra. You have heard him on the air, you have enjoyed his records, now dance to his music with the WARTS. Tickets $2.25 at the registration desk.

FRIDAY MORNING, MAY 9

NINE-THIRTY O'CLOCK

SECTION MEETINGS

JOINT SECTION — MANUAL TRAINING AND VOCATIONAL EDUCATION—Ball Room, Leamington Hotel
W. B. Johnson, Elmer W. Christy, Chairmen

Topic: **"Some Recent Findings in Pupil Adjustment and Guidance"**

A. H. Edgerton, Director of Vocational Guidance, University of Wisconsin

Topic: **"The Terminology Inquiry"**

William E. Warner, Industrial Education Department, Ohio State University

Topic: **"Interpreting Modern Demands Through Manual Arts Teacher Training Programs"**

Clyde A. Bowman, Dean of the School of Industrial Education, Stout Institute, Menominee, Wisconsin

FRIDAY MORNING, MAY 9

NINE-THIRTY O'CLOCK

PRINTING SECTION—Blue Room, Leamington Hotel
Fred Landon, Chairman, Dunwoody Institute, Minneapolis, Minnesota

Topic: **"Printing Education in America"**

Fred J. Hartman, Director of Education, United Typothetae of America Washington, D. C.

Topic: **"Printing With Watercolor Inks"**

A. L. Sutphin, Vice-President, Braden-Sutphin Company, Cleveland, Ohio

Topic: **"All in a Day's Work"**

Edwin L. Olson, Printing Instructor, Roosevelt High School, Minneapolis

FRIDAY AFTERNOON, MAY 9

TWO O'CLOCK

GENERAL SESSION

Ball Room, Leamington Hotel

ADDRESS—**"The Special Teacher and Academic Tradition"**
Dr. John Shapley, Head of Department of Art, the University of Chicago, Chicago, Illinois

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FRIDAY AFTERNOON, MAY 9

NINE O'CLOCK

GENERAL SESSION—(Continued)

BUSINESS MEETING

AWARDING OF PRIZES BY THE SHIP
Drawing in charge of George D. Full and Gordon James

FRIDAY EVENING, MAY 9

SIX O'CLOCK

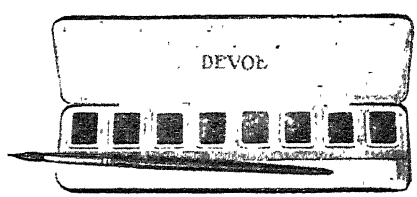
DINNER MEETING—Guests of The John Leslie Paper Co., Minneapolis. Minneapolis Athletic Club.

Topic: **"Harmonizing Paper with Typography, Process and Purpose"**

Arnett W. Leslie, Vice-President, The John Leslie Paper Co.

A Display and Discussion of Early Printing by Carl Jones, publisher of the Minneapolis Journal.

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NEW YORK CHICAGO

Address of Welcome

CARROLL R. REED
Superintendent of Schools
Minneapolis, Minnesota

FRIENDS of the Western Arts Association: I suppose that a speech of welcome could very well be one word. It is pretty hard to improve on that old Anglo-Saxon word "welcome." It has within it the meaning of a joyful reception of a guest and that is exactly the way we feel here in Minneapolis about the Western Arts Association. We are exceedingly glad to have you with us. We know it will be good for us and we hope it will be good for you.

Miss Foster told you a Swedish story and I think I will tell you an up-to-date Swedish story of an occurrence in one of our Minneapolis schools the other day. It was in the southern part of the city where most of the children are Swedish and a little girl was reciting in geography. She was telling about the pyramids. She said: "You know the pyramids are the tombs of the kings. They buried the kings and then they built the pyramids for the kings." One of the other pupils asked: "Was more than one king buried in a pyramid?" "Oh, yes. There were many kings in some of the larger ones, several corridors and many rooms, and each room had a king buried in it, and over the door was the king's name, either Peterson or Anderson or Johnson or whatever the king's name was."

When I came into Minnesota about a year ago I drove in from Wisconsin, came across the bridge over the St. Croix River, and found myself on Minnesota soil. The very first sign I saw read: "You are in Minnesota, the Bread and Butter State," and we are, of course, the bread and butter state, and yet I think that most of us who live in Minneapolis are alive to the Scriptural injunction that "man does not live by bread alone." There is a place for other things besides the things we eat, and we are looking to you, who are the leaders in the Fine Arts, to bring to us those finer things. "Where there is no vision the people perish." We are ambitious here in this city to know more of the finer things of life. For that reason we are particularly pleased to have with us the Western Arts Association.

I know Miss Foster has worked very hard for many weeks. Although I am chairman I am just a figure-head. She deserves all the credit for getting ready for this great meeting.

We will be glad to have you visit our schools and see our city. It is a very beautiful city and we are proud to have you see its beauty.

I hope the sum total of the Western Arts Association convention will be an enlivened interest in art in the city, I hope it will mean an improvement in the art work we are doing in the Minneapolis schools. I hope that each one of you will, after your visit in Minneapolis, go back to your work with inspiration to carry on for the good of the cause. Thank you.

Adjustment of the Arts to Modern Education

J. H. McCloskey
Director of Technical Work, Lakewood Public Schools
Lakewood, Ohio

IF I WERE to follow my own inclination, I should spend a large part of the time allotted to me in reminiscing with fellow students of Stout, Bradley, and Columbia and with those whom I later taught at Stout. So that those interested primarily in art might not be entirely neglected, I could tell of my delightful experiences at New York University when I worked under the late Dr. Payton Haney. Recalling pleasant associations at these institutions would be a real pleasure to me, but many here have never attended Stout, Bradley, or Columbia and perhaps know but little of New York University and Dr. Haney.

Just a word about the material and equipment exhibits. You will notice that they are just a little better than ever before. This we appreciate. Also, we have some new exhibitors. When you renew your acquaintance with the old exhibitors, be sure to make those who are with us for the first time feel that they have come to the right place.

And our magazines—just compare a few recent copies with the issues of 1915 or 1920. It will not come amiss to let the editors, who are real helpers in the field of the arts, know that we appreciate their efforts. In this connection may I wax so bold as to offer a suggestion or two? These magazines have art critics who undoubtedly are capable, yet it seems to me that some of the designs might be more rigidly censored. Such a wide use is made of the suggested projects, and so many thousands of any one project may be made that designs which are not good should not appear. Many manual arts teachers today have little or no training in art and are incapable of directing pupils in the choice of a design, to say nothing of helping them to alter it.

This is possibly a defect in the teacher training program of some schools that should be given consideration. While the drawings that appear in the magazines are getting better, there is still much room for improvement. The lettering should be improved on many drawings, and in all too many cases the drawings are not in accord with the accepted methods of representation. This is not in keeping with the otherwise high standards of our magazines, and is not a good advertisement for the institution that trained the teacher who submits the project. All drawings should be "checked and double checked" before they are printed.

And of the books that are coming out—nearly every week we hear of one or more new ones, many of which are excellent. It is beginning to be a job to keep track of them. At least two publishers send to librarians and occasionally to others a 3 x 5 index card that gives an outline of each book that they publish. Each of us should build up a complete card index of all books in our field and keep it up to date. Many, of course, are already doing this and very likely use the cards sent out by the publishers. We should make it a point to compliment those publishers who send out the index cards—urge them to send to all teachers of the arts, and as a result, other publishers may do likewise.

I wonder how many of you have ever heard Clarence Darrow criticize the schools. He started out as a teacher, and though he is perhaps not conscious of it, his criticisms are really based on conditions in the school which he taught in northeastern Ohio some forty years ago. Mr. Darrow has a wonderfully keen mind but I doubt if he has kept closely enough in touch with the schools to make his criticism of them fair or just or of value in any way.

Even those who are in school work, perhaps high up in the profession, cannot possibly keep in close touch with all phases of it. Those at the top in our own field may not always be able to see clearly the problems that those in the ranks have to meet.

In Ohio a general shop program and a program on mechanical drawing were arranged for the state convention. Those in charge had sent throughout the state and had asked each teacher to submit six questions on each subject. From these questions, fifty on each subject were selected. A director in a large city who was in intimate contact with the general shop headed the discussion and answered nearly all of the questions in a very helpful manner. For some reason, a professor of engineering drawing had been asked to answer the questions on drawing. Many of his suggestions did not seem particularly helpful and when he came to this question, "To what extent should the object be used in teaching mechanical drawing to junior high school boys?", he certainly did not bridge the gap between the engineering college and the junior high school. There was no question in his mind—the object should never be used—and he so expressed himself with the air of one having authority.

The judgment of those whose work far removes them from contact with the grade of students being considered should seldom be swallowed hook, line, and sinker. We who are close to the problem know that the learned professor was wrong, just as we know that some of the requirements of our higher institutions of learning prevent our secondary schools from accomplishing the greatest good for the largest number. The Federated Art Council has made some

worthwhile studies and I believe that more of this work would be helpful. If carried on with the same discrimination used up to date, the resulting recommendations would be safe to accept.

Public education is the function of the state and the foremost factor in citizenship. Colleges recognize the value of this training, and I believe that more and more they are realizing the value of the arts in a liberal education, but they are still hedged in by tradition. As moral values in education and other objectives of unquestionable worth are given proper recognition, unnecessary college entrance requirements are bound to break down. This has been gradually taking place. I believe the change would come more rapidly if due consideration were given to the admonition of that immortal patriarch of education—Wm. Hawley Smith—"Why teach horses to fly."

Sometimes the misfits created by our misdirected efforts land on their own feet in spite of them. Last fall there came, asking admission to the Lakewood senior high school, a boy who had been a poor citizen in two junior high schools and had finally left school without completing the ninth grade. As his sister was a member of our National Honor Society, the boy was admitted. He was allowed to take four periods of art each day, and last week his prize winning portrait of a Boy appeared on the cover of the sixth annual student-written number of the Scholastic. The most worthwhile result, however, is the change in the boy himself. He is happy and is a good citizen of our school with an urge to become even better.

It may seem that the tenth grade is too early to specialize. Possibly in this case the boy is just finding himself. Which ever is true the end justified the means.

Dr. Eliot has exalted the life career motive. "Know something about everything and everything about something," was William James' idea of a liberal education. But did James say which we should attempt to do first? Oft times that which seems logical to our dull brains is not psychological.

With language, and at times mathematics, listed under the same heading as the arts, "Electives for Entrance to College," rather than as prescribed subjects, the arts will grow by leaps and bounds. The Western Arts could to advantage conduct an investigation and make some recommendations with regard to college entrance requirements, for they effect very definitely the number of arts teachers required and, to some extent, their preparatory training. A more pressing need for investigation and recommendation, however, is that embodied in our theme, "Adjusting the Arts to Modern Education." For this theme we are indebted very largely to our vice-president, but your president is in full sympathy with it and hopes very much to see a

movement started so that teachers of the arts may devote their time to the pursuit of such courses as will enable them to better adjust themselves to the educational program and be more helpful to those whom they serve.

I make no plea for narrowness of training for teachers of the Arts—just the opposite. Yes, a broad training. While the first and foremost aim should be to gain proficiency in their chosen line of work, a good command of the English language is a necessity, and also an intimate knowledge of children together with an understanding of social conditions. Let the realization of these objectives be given precedence, then let them choose Latin, Chemistry, anything they may desire.

What should a teacher of the arts know? What should a teacher of the arts be able to do, and what must he be in order to be successful? Such an analysis would be complex, but hardly impossible and perhaps very helpful. Having made the analysis, then some consideration would have to be given to the time it would normally take to gain the skill and acquire the knowledge and bring about the necessary changes.

A few years ago Pratt Institute, Columbia University, Bradley, Stout, and other institutions gave two-year courses of training for teachers of the arts. Now there is an urge for these same teachers to acquire a degree. Some of them may feel that need to gain some proficiency in furniture design but are forced to study chemistry, let us say, while others who have had no design at all and feel handicapped by the lack of it must study language or some other purely academic subject. Can any one prove that they will be more effective teachers when they have finished? Just how does a teacher's knowledge of the French language expressed to a group of ninth grade children impress them as a substitute for his inability to demonstrate to them as cleverly as their teacher did last year? How much of skill and technical knowledge should a teacher possess? Is there time in the schedule of studies as now given to gain the skill and knowledge?

In many cities our teacher training institutions have not trained all of our teachers, many directors having found it advisable to get men from industry—men who have acquired technique and can demonstrate. State requirements are making this more and more difficult. In such cases, when the tradesman was of the proper type, so that he had not picked up undesirable habits, and took readily to the training program, many fine teachers have been developed. In all these cases the training in skill has not rested upon the teacher training institution. Would one-fourth of a full four year college course in shop and drawing have made him equally as efficient or even half as efficient?

If the teacher goes into the trades and gains the skill and knowl-

edge, is it recognized any place by a salary increase equivalent to what he would get if he spent his time in school on academic subjects? How many teachers who have three years credit toward a degree can get credit for shop and drawing in their fourth year, and if so, how much? Should such courses count beyond a bachelor's degree? Should courses taken by arts teachers who already have a degree help them directly in their teaching work? Some courses in analysis, tests, etc., may be helpful, but most of the advanced courses are planned for those who are to be supervisors and administrators. To be sure, none of these courses will hinder a teacher, but are they the most beneficial courses at which he could spend his time? It seems absurd to train a thousand administrators for ten jobs. And I have little patience and less respect for those who minimize the job of the teacher and are always urging teachers to get into administrative work.

A superintendent in one of our largest cities once told a committee on salary schedule that to get more money they should get out of teaching and into administrative work. In the same system my old principal used to get so angry when one of his best teachers was promoted (as it was called) to a grade school principalship, that he could scarcely speak to the person who had left the teaching ranks to take up work for which he was, perhaps, not especially suited nor about which he was not particularly enthusiastic, but which he entered because it paid more. It was his belief that a teaching position was of such importance that any unusually good teacher should be paid enough to keep him where he could render the greatest service. I recently heard a professor of school administration, who had been an unsuccessful superintendent in two fairly large cities, urge the members of the graduating class of a normal school to strive to get beyond the job of a class room teacher. He was subtle in the way he expressed it, but more harmful advice could scarcely have been given.

Surely the job of a class room teacher may be made big enough and should be paid well enough to attract and hold the brightest minds. Could there not be a degree for a master teacher? And should not the majority of courses for such a degree be directly helpful in making the teacher more skillful and proficient as a teacher?

What should a master teacher of the arts do to receive a degree signifying that he has become a master in his line of teaching? Let me confine my suggestions to the Industrial Arts. First—having been graduated from a teacher training institution properly equipped to train industrial arts teachers, he should have three years of successful full time experience, or the equivalent, in teaching shop work; second—he should work forty weeks, either consecutively or four summers of ten weeks each, in one or two skilled trades; third—he should be required to complete a definite amount of graduate work that

would help to make him a better teacher. One of these courses should be similar to the course given in geography at the Cleveland School of Education where twenty-five trips of a half day each are made to as many industrial plants and an equal amount of time taken to answer questions and write a report of the trip. I can see no reason why a course of this sort should not be a requirement for all teachers. A trip abroad is fine, but in no case should be substituted for a knowledge and appreciation of conditions at home into which those being taught will soon be projected. Let our motto, "See America first," have a larger meaning.

Over fifteen years ago I told one of my former professors that, as far as I knew, there was not one course offered in all United States that would directly help me in the teaching of drawing, forge shop, and machine shop and at the same time count toward an advanced degree. What change has there been in that time? I may not learn as readily as some, but I have taken courses enough to earn a Ph.D. if they counted toward an advanced degree. I have worked out in industry longer than it takes to acquire a Ph.D but I do not even yet feel clever enough to demonstrate as I should like to be able to do.

"If I were a cobbler, I'd make it my pride
The best of all cobblers to be;
If I were a tinker, no tinker beside
Could mend an old kettle like me."

During my college days I worked one summer with a gang of linemen putting in telegraph posts. A big old German was assistant straw boss. One of his jobs was to put up the guy wires to brace the pole. Some one else had dug the hole, which was about like a grave, and tossed in the dead man—a wooden railroad tie with a wire attached. The old German came along to finish the job, and found that the tie had been carelessly thrown in and was not parallel with the sides of the hole. The job had been poorly done and he exploded in this wise, "Warum when a man a thing machen, warum kann a man nicht gute machen?" "Why, when a man does a thing, can he not do it well?" This old German probably had never heard Edwin Markham's significant lines, "Whether 'tis hidden or whether it show, let the work be sound for the Lord will know," but his German training had hammered that attitude deep into his makeup.

It is generally conceded that an article marked "Made in Germany" is of superior quality, in workmanship at least. If we in America are to produce good workmen, they must be imbued with the idea of doing things well. With teachers not having the proper attitude toward technique, with teachers untrained to stimulate by superior workmanship, can we hope to maintain standards so that our country can compete successfully with the rest of the world?

Shall teachers who earnestly and consistently strive to improve their technique and to gain more skill be deprived of the just rewards of their labor? Some school boards are counting toward salary increase, courses that help teaching efficiency even though they do not count toward a degree. This is a move in the right direction, but it seems to me that these courses should be given other recognition as well.

Prof. Shane's article "Educational Requirements of Industrial Arts Teachers" is a helpful contribution. He says that the trend is definitely upward and it will probably not be long before a college degree will be the common minimum requirement for industrial arts teachers everywhere. This will, in all probability, be equally true of art and domestic science teachers.

I do not believe that many are averse to higher requirements if they can feel sure that these higher requirements will insure better teachers. But who determines just what teachers of the arts may take to obtain their degrees? Here and there a school has conducted an investigation and one or two states have attempted to gather data along this line but, by and large, the investigations have been superficial. Some censure the accrediting organizations and possibly they do err, but these organizations are made up of our best school men, and where in the world will you find a more progressive group of men than our best principals, superintendents, and deans of schools of education? They use the information at their command, and in the humble opinion of your president the responsibility does not lie with them for conditions as they exist today.

I believe the group that I am now addressing is largely responsible. We as teachers and supervisors of the arts have neglected a part of our work. It is our duty to make recommendations to our superior officers. Here and there we have spoken but our voices have been weak. The accrediting associations, the various state superintendents, and the deans of educational institutions are listening. We must speak with a strong, united voice, and we must be heard.

Education and the New World

DR. M. E. HAGGERTY
Dean of Education, University of Minnesota
Minneapolis, Minnesota

Mr. President and Members of the Western Arts Association:

I AM happy to join in welcoming the Western Arts Association to this community and to do this particularly for the University of Minnesota. From a distance we have watched the development of your organization, its growth in numbers, but more particularly its increasing grip upon the reviving idealism in our schools and its inescapable challenge to our changing educational program. It is a privilege to have you in our midst. We trust your stay here will not be unprofitable to you.

You have, however, asked me to go beyond a friendly hospitality and to say something useful concerning the significant movement you represent; its relation to purposes intrinsic in the modern educational crusade. An equally ignorant but more cautious man would have declined this part of your invitation. After forty years of self analysis I have yet to discover any gift that would qualify me to have an opinion upon the intimate problems with which you daily deal, and I am frank to say that most of the time I do not understand either your product or your professional conversation. In but one of the fine arts do I feel the assurance of personal judgment that I feel in matters of science or the affairs of practical life. In the realm of literary composition I tend to trust my own sense of fitness and charm, and to defy the professional critics. I am sensitive to a fitly chosen word; I understand emotional restraint; I am confident that "The Bridge of San Luis Rey" is more beautifully done than many another current story, and that Eugene O'Neill has a more restricted understanding of human nature than had either Ibsen or Shakespeare. To be sure, I know I may be utterly wrong in such matters, but I do not feel here the uncertainty and bewilderment of which I am conscious in all the other arts. Everywhere else from the selection of neckties to the admiration of architecture I am dogged by a second-handedness of judgment that is highly distressing.

This embarrassing confession comes more easily because I know that most of my generation labor under like limitations, limitations which we are fain to charge not to original deficiencies of mind but to the inadequate schooling which the youngsters of our day received. There were no pictures on the walls of the one-room school where I learned to read and spell except such as rebellious youngsters pencilled to caricature and plague the common enemy; no sculpture except that which our jacknives cut in the hard unfriendly desks and seats where,

day by day and year by year, we learned and re-learned a meaningless multiplication table. Across the years the unutterable dullness and ugliness of that box-like room, its soiled and battered door, its dripping, moldy water pail and rusty cup, its frayed maps and dusty crayon, its worn and hardfaced teacher, rises ogre-like in memory so that had I not seen the richer, happier, lovelier schools of recent years I would not believe the latter possible. We sang no songs in that school, and so thoroughly had the practical minded patrons "cleared" the grounds that not one of the native elms, poplars, walnuts, maples, or beeches which once had vied for nurture from that acre of soil was left to bend its gracious boughs above playing children. The once rich and towering forests had given way before the woodsman's ax to leave an empty landscape relieved only by wormlike fences, and uncouth and sordid buildings.

I do not blame the school too much. It was part and parcel with the conquering frontier, and I remember that old men came to school on festival days to tell gravely how our school had improved over those of their boyhood.

My father was a pioneer and I knew his generation—gray-bearded, toughened men of action. As a young man of twenty he had shouldered his ax and walked two hundred miles to cut himself his own home out of the untouched forest. My mother's father, with his plane and saw, his chisel and hammer, had made the furniture for that home, its tables, its beds, its chairs, and chest of drawers. My father's mother had completed the homemade linen supply with a counterpane fashioned by her own hands from raw flax and wool, dyed and woven into a spread of color. But in my early boyhood I saw the homely art of my parents and grandparents give way to quantity production. We moved into the new and larger house furnished with machine made chairs and beds and tables of no design. They were like those of the neighbors for twenty miles away because all were supplied from the big furniture store in the county seat. I saw the turn-top table my grandfather had fashioned from clear yellow poplar broken into kindling wood and replaced by a badly glued but highly varnished extension table from the store. When, years later, I sought to rescue the cupboard he had made with broad, unblemished walnut boards from the damp, moldy cellar to which it had drifted, I found it worm-eaten and rotten. The colorful handmade shawls my mother wore must have suffered like neglect for all trace of them is lost. As these works of the early handicraft disappeared I saw the inexplicable what-not with its load of bric-a-brac come to relieve the tedious monotony of our bare rooms and our lives hungry for some touch of beauty.

Nor did frequent visits to the villages and smaller cities, or the occasional trips to the larger cities add much to an adolescent's artistic education. Everywhere was the hard, angular, gridiron arrangement

of city lots, the monotonous succession of box-like dwellings, roads and streets, dusty and denuded of trees, the "general" store conglomerate with brown sugar, navy beans, Arbuckle's coffee, Star tobacco, nails and hinges, blue overalls, and figured calico. Always there was the horribly colored railroad station and its environs grimy from the ever-recurring billows of soft coal smoke, and thronged with loafers impeding the movements of the few travelers to the county seat or the state capital. Inside any of the homes of these towns, as in the rural district, one met the ubiquitous whatnot, cheap furniture often formed into exaggerated curves and lumps, the endlessly repeated sentimental chromo, gay ladies in bangs and bouncing bustles, derby-hatted swains in frocks and Prince Albert coats.

To be sure, the human spirit in the eighties did not surrender completely. It stuck colonial porches on houses that bore no other semblance to colonial architecture; it used the school bell as an excuse for lifting crude gothic spires above red brick broadsides punctured at regular intervals with rectangular window spaces; it built circular turrets on the upper corners of cubical houses; it mixed varied pigments in white lead and spread them over the outsides of houses; it billowed bride's dresses with frills and embalmed the effect in bridal photographs; it collected pretty sea shells and piled them in mounds with colored glass upon the parlor table; it dipped the remnants of old dresses into bright dyes and sewed and wove them into motley carpets; it bought plush sofas for the spare room and shut up the room till the next Sunday.

In spots there were, of course, better things than these; an occasional house fashioned in colonial style; a broad and spacious lawn; broad radial avenues in cities; excellent furniture rescued from indifferent hands; glorious white houses opalescent in the altering sunlight; gorgeous hollyhocks along the garden fence, fragrant colorful roses and peonies, apple orchards blossom-scented in the spring and fruit-laden in the red and gold of autumn; reed organs in humble homes and in smaller churches, pipe organs in the more pretentious churches, and pianos in the more wealthy houses.

But almost nowhere did one see worthwhile pictures, no graceful figures cast in plaster or bronze, and such worthy art as did come to light was so occasional and sporadic that it seemed foreign and unrelated to the chief concerns of life, the highly practical matter of getting a living and accumulating wealth.

I well remember the thrill and pleasing shock my mind received when, as a mere boy, I wandered alone for a week about the dream city called the Columbia Exposition or the World's Fair in Jackson Park. Chicago itself was like the cities I already knew, superlatively dirty and ugly and wicked on a grander scale, but the Fair was different—buildings that belonged together, dignified columns and arches

and domes clustered about a lovely lagoon, and glorious in alabaster white that received the sunlight and sent it back in iridescent colors. Best of all was a building devoted to the fine arts where were gathered colorful paintings, and bits of marble that gave to beauty tangible reality I had never experienced, a substance as genuine as that of plows and wagons, a vitality as significant as that of politics and religion.

But from so fleeting an experience I, like thousands of other boys and girls, returned with but little permanent value. Our villages and homes had not in the least been altered, and the barren tedium of the school was in no way relieved. If perchance, our teachers had spent a summer day or a fortnight at the Fair, they had found the experience as strange and foreign as had their pupils, and they returned to follow the next year's work in the old grooves with spelling, reading, abstract arithmetic, fragmentary geography and history, and the Spencerian system of handwriting. In all this monotonous welter there was one chief relief to be found, and that was in our readers which drew increasingly as the years grew from truly good literature. Were this the appropriate occasion I could bring copious testimony to the inspiriting character of these books from high sources. Mark Sullivan, in his second volume of "Our Times" has done so. Millions of men and women gained from their school readers their introduction to Shakespeare and Milton, to Irving and Lowell, to Scott and Lincoln, an incalculable heritage of ennobling literary art.

With all these admitted disqualifications it may well appear unwise to proceed further. Why should I, so uneducated in your craft, deign to talk with you about your problems? Frankly, because there are aspects of art instruction in the schools that transcend the immediate interests of any professional group. Unless my outlook upon modern life and social obligations of the schools is awry, we are all of us facing a changing educational future in which you will be called upon to play an ever-enlarging role. Unless those of us who work alongside of you in the older and more accepted procedures of the schools develop a better understanding of your possible mission, your way will be restricted and your service limited far below what in the next quarter of a century it should become. In this discussion I propose, therefore, to deal with certain of these peripheral problems.

It is not possible to do more than suggest the nature of these general problems although each of them is worthy of extended treatment. Nor is it feasible to make the pretense of a complete catalogue or even to indicate an order of importance. The matters to be considered are not separate and distinct issues. They overlap and interweave with each other and are to be regarded as so many approaches to a single large and complicated problem. With this protective preface we may take up one by one a limited series of questions in which

teachers of the arts share a common concern with others interested in educational and social advancement.

First, we may address ourselves to the problem of the useful employment of our leisure time. The decade since the war has been witness to the rapid acceleration of productive labor. The phenomenon did not begin in 1920. For a hundred and fifty years civilization has been gaining mastery of its physical environment through invention and scientific discovery. The period is roughly coterminous with the national life developed on the American continent although the theatre of a rapidly changing culture has been the whole western world. What gives distinction to the past decade is the increased rapidity which characterizes this change. We have stepped up the total power in the world about fifteen fold in a century, and have probably doubled it in the past decade. We may double it again in the next ten years.

Manifold consequences flow from this accretion of new power, but here we shall be concerned with but the effect upon the reduction of the hours of necessary labor. Year by year we behold the miracle of reduced labor and increased production. Since 1890 our manufactures have increased three hundred thirty-nine per cent, our population but eighty-three per cent. We are witness to the closing of industries because consumption of goods, despite extensive advertising campaigns and high pressure salesmanship, can not keep pace with production. We have seen hours of labor reduced from twelve, or even a higher figure in some cases, to ten, to nine, to eight, to seven, the working week cut from seven days to six and five, the working year from twelve months to a fraction of the calendar. Mr. Stuart Chase gives a table showing the magic of machine production in various industries. With a machine one girl can do what three hundred girls do by hand, one man can thresh as much wheat as 135 men, or dig as much iron ore as 500 hand workers. He further computes that we have an excess of skilled hands above the necessities of production amounting to about 650,000 persons. What shall these unneeded men do? Or if we shorten hours and days of labor so as to give all some employment, what shall all of us do with the extra hours thus gained?

Primarily, the issues set by these questions are social problems in the large sense. The narrower question set here is what can the fine arts regarded as living interests do to provide wholesome and ennobling employment for these surplus hours of human living? What can teachers of fine art do to prepare young people against the day of threatening boredom, depleting play activities, the grinding monotony of a machine-made day?

May I say that in my own thinking the arts do much to solve this problem, not so much through the building of museums and the assembling of great works of art from many lands as by enriching our

educational program from the kindergarten to the university with the activities of creative thinking. Tardily, against the inertia of academic tradition and athwart a hard educational philosophy, creative play has penetrated the severe regimen of the schools. Beginnings only may thus far be recorded so far as the arts of hand and eye are concerned, which are as yet decades behind music and literature in their influence upon the life of the school. The time has come for a more courageous challenge to prevailing practices. If drawing and painting, sculpture and architecture can but achieve a unity of purpose and a coherent program, the time is, in my judgment, ripe for a movement forward. Informed with the skills and ideas which art instruction can provide, the next generation may be assured of better manners, higher standards in recreation activities, better taste in all matters involving form and color, a more wholesome and satisfying life.

Foregoing matters relate largely to personal development. Let me set a problem of quite a different type, a community problem. Some of our towns and cities, and parts of most of them are unbelievably ugly. In our haphazard way of building we have not merely put up unsightly structures and crowded them together in unseemly fashion, but in the process we have frequently despoiled the native charm and beauty which originally was there. Think of the cities where lovely water fronts, borders of streams and lakes, have been disfigured, by smoke laden chimneyed, noisy factories, and all too frequently, by the debris of furnaces and the waste of factory processes. We have cut and paved great highways across prairies, through entrancing forests, up mountain sides, and then have allowed great dumps of disabled Fords, rusty bed springs, and decaying animals to accumulate along the way. Recall the mammoth sign boards without taste in color, impertinent and offensive, which one may not escape reading on a motor trip about the environs of any American city. Watch a beautiful building rise, as you may almost any day in any one of our great cities, above the uglier buildings about it and question yourself about its setting, its need of surrounding space, of adequate perspective. Difficulties here suggested may be hardly helped by legislation, although effective laws may give some aid. The need is for an enlightened public taste that revolts at ugliness and senses appropriateness in design and color. In scarcely any other part of our school curriculum is the problem here suggested even touched upon. Is the program of art instruction in the school geared to make any contribution to its solution? Can we make children in our schools and colleges sensitive to the need for wise city planning, competent to build the city of the future?

Let us shift our line of thinking once more and ask to what degree is the capacity for creative art a common ability, to what degree the special gift of a favored few? Let us also ask concerning the neces-

sary relationship between the ability to make beautiful things and that of enjoying the beautiful things that others make. Answer to either of these questions can at present be given only in the most general terms despite our fifty years of experimental psychology which has repeatedly touched upon the margins of these problems but has not yet provided a definite answer to either of them. Here, as in so many other fields of education, empiricism is still our major guide.

Choosing the second question first we may say that there is much reason to believe that constructive ability and the power for appreciation do not necessarily parallel each other. A million persons are thrilled by a well drawn figure, an artistically colored landscape, a majestic building, and will part with hard-won cash to possess art objects, and among this million there may not be one who can make a picture that will thrill any other person. Our expensive art museums, the increasingly lucrative business of interior decoration, the multiplication of shops and stores dealing in beautiful things is eloquent testimony to a wide and increasing appreciation of art objects.

Account of such evidences as these must be taken by the schools if the complete usefulness of the fine arts is to be achieved. Possibly the story of the literary arts may have pointed the way for the other arts in the schools. Everywhere the understanding and appreciation of literary prose, of poetry, of drama is taught as a thing worthy in itself. Productive composition is something else, related, to be sure, but by no means in perfect correlation. The teaching of English literature in our schools through a period of forty years has incalculably influenced our whole educational program in America. It claims more time than any other school subject and it has been so caught up in our thinking that there are few who would now reduce its claim upon school time or energy.

Somewhat the same observation may be made relative to the changing emphasis upon music. There was a time when organs and pianos and violins first came into our homes and schools that the whole effort was to make individual performers, and many bad performers rapidly appeared. With the coming of the phonograph and the radio entirely new possibilities in music education have appeared, and we are now teaching millions to listen to, and, may we hope, to prefer good music who probably could never by any magic have been made acceptable performers.

What effect this growing tendency to teach the appreciation of literature and music have had upon the creative tendencies of our people it would be difficult to say. Certainly it has not prevented productive work in either field for probably in neither have we ever had in this country a more vigorous creative activity than now prevails. It is my own belief that this story has implication for the other arts. If you are to meet the total situation now opening in our schools you

can not confine your work merely to creation. Your obligations are to the whole body of children. Painting and sculpture, and most of all architecture, can have but abortive development in a society such as ours if it seeks only the allegiance of the small group of creative artists. It must inform and elevate the taste of all of us if it is to become a vital influence in our common life.

Let us now turn back to a former question. Is art ability the peculiar possession of but a few persons or is it distributed widely among the total population? Unfortunately psychology has as yet no adequate answer to this query, although with the rapidly multiplying devices for measuring human abilities this state of ignorance should not long continue. The recently published tests by Christianson, by Meier and Seashore, by Macadory, and the studies by Spear, Hoag, and others are all promising. Investigations such as these should be repeated and extended in great numbers. So far as I interpret these studies we may well believe that many of the abilities involved in art production and appreciation, like other important human capacities, are distributed widely among the young people in our schools and colleges. Possibly we may in the end find that the normal probability curve is the correct picture of their incidence in the whole human family. Whatever may be the ultimate verdict, we are not at present justified in excluding any group of individuals from the advantages of art instruction should their interests lead them to seek it. Our only defensible program at present is to assume the wide distribution of art abilities and set our school program to provide art education for large masses of our schools.

If the advantages of art teaching are to be thus widely available, the rigid program of the schools, and, particularly of the secondary schools, must be relaxed. Pupils must find the curriculum in art as easily accessible as they now find that of the standard subjects. Students desiring to study art should not be debarred therefrom because of coercive requirements in mathematics and language, important as these admittedly are. The protagonists of the fine arts may well challenge our educational philosophers and administrators to show why a year of geometry or language is more valuable to many students than a year of drawing and sculpture, or that "masterpieces" of literature are certainly more enlightening than the masterpieces of fine art.

But if the secondary curriculum is to be liberalized, the entrance requirements to college must be changed also. I know an institution that refused admission to a young woman, said by competent judges to possess very exceptional talent and training in music, because the applicant had no credit in plane geometry. It treated similarly a gifted student and teacher of the fine arts because she had neglected in her

earlier years to master high school algebra. The absurdity of such practices is collossal.

I venture the assertion that a good basic training in the fine arts and music may be as useful for all the general purposes of secondary education as any other high school subject except training in the vernacular. The champions of this view, however, have a long errand ahead to convince the reigning powers that this is true. It is probable also that the arts themselves should improve instruction and enrich and vitalize their curriculum before pressing the issue too vigorously. The effective introduction of any new subject into school curricula should be a gradual process involving as it does the development of a program, but more particularly, the provision for a sufficient number of trained and competent teachers. More than one promising subject has met disaster because it was badly taught. Persistent patience and competent service will, in time, win the day.

I began this discussion with a confession of ignorance which you will probably feel that I have now more than amply demonstrated. I trust, however, that you will feel that those of us whose work touches yours are interested in what you are doing. I think we are tremendously concerned about it. We shall follow your leadership, and lend our best aid wherever we find it possible.

Art As a Factor in the Modern Curriculum

ESTHER W. WUEST
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Prologue:

Two thousand miles away in the far west lies a great country of opportunity which is today celebrating the centennial of the Oregon Trail. On April 10, 1830, the first wagon trail left St. Louis for Oregon. One hundred years have passed, and in a formal proclamation President Hoover has called upon our nation to commemorate this anniversary. In this celebration, the White man and the Indian are sharing recognition for bravery and heroism. The pioneers who blazed the trail exemplified ideals of heroism, hope, and courage, as they pressed fearlessly on that civilization might expand. The Oregon Trail has become history. Its incidents and characters are immortalized in story, fiction, and verse.

The lessons we may learn from the story of the Oregon Trail are applicable to our life today. "We are what we are because of the past." Education must press forward in the same courageous spirit.

By a series of their own school-made slides, the students of the Art class will briefly portray the story of the Trail and by means of these slides contribute to the activities of the school.

SLIDES OF THE OREGON TRAIL showing map, landmarks, incidents and characters.

In these slides interesting facts of history have been shown, the field of literature has been entered, ideals of patriotism and of heroism have been awakened, and art has entered into the life of the school.

Last February the department of Superintendence of the National Education Association met in Atlantic City. The theme of this convention was, "Education in the Spirit of Life," and the following statements appeared on their program cover:

SLIDES

"Education is life. This statement of the philosopher which seemed so radical when first uttered is now generally accepted. American education is engaged in the process of putting the ideal into practice. As we would have life, so must our education be."

Life is idealistic—Education must aim high.
Life is friendly—Education must develop a social spirit.
Life is dynamic—Education must move forward aggressively.
Life is practical—Education must be efficient.
Life is recreative—Education must train for leisure.
Life is progressive—Education must adjust itself to new needs.
Life is cooperative—Education must itself cooperate.

Our convention theme is, "Adjusting the Arts to Modern Education." Supply the word "Art" for "Education" and we find these same statements in accord with our aims:

Life is idealistic—Art must aim high.
Life is friendly—Art must develop a social spirit.
Life is dynamic—Art must move forward aggressively.
Life is practical—Art must be efficient.
Life is recreative—Art must train for leisure.
Life is progressive—Art must adjust itself to new needs.
Life is cooperative—Art must itself cooperate.

The Oregon Trail was a reality, life itself, and the art students carried it into the school program adding a graphic interest to the study of history.

In evaluating the subject of art as a factor in the school curriculum, we find many elements which are essential to the fullness of life, both spiritual and material. As an uplifting influence, it opens avenues of beauty and enjoyment. Nicholas Murray Butler said, "The only things that do not pass in this transitory world are art

and ideas." With such a heritage, art cannot fail to hold a place of dignity and usefulness in every educational program.

The art teacher has the opportunity to bring her subject into relationship with other school subjects. In order to make an intelligent adaptation, the art teacher needs a good balance of technical and academic training—technical training to set higher standards of excellence and execution, and academic training for cultivating breadth of view.

As the perfect life is one that is in accord with the universe, so the successful art teacher is one who is in accord with the life of the school.

In the past the school subject rather than the child interest was the working basis. When art enters the field of public instruction, it should cease to be an end in itself and should become an integrating factor influencing attitudes, appreciation, and knowledge; establishing relationships to life's situations; and developing the ability to use it. Many have lost sight of this connection. The value of a subject is its worth. What is art worth to your school?

We are living in an age of consolidation. Nations are uniting on government affairs, and business tendencies are toward united efforts, for in unity there is strength.

Life is progressive. Isolation cuts one off, but mingling brings recognition. Let your art motivate through the school program and function in every department possible. Make it flexible and vital. Thus art becomes an integrating factor in the daily program where its influence so permeates life and radiates joy that its removal would be keenly felt.

Herein lies an opportunity for salesmanship. The farsighted art teacher will sell her goods to the various departments. History, Science, Geography and Literature are excellent customers. In the language of the radio, "Tune in with a harmonious chord." Broadcast a message that will give joy and inspiration. Be ready to cope with new situations in the spirit of helpfulness, and your art will become a golden thread in the web of the curriculum.

ART RELATIONSHIPS

SET OF SLIDES ON CORRELATION PROJECTS

In almost everything we do we express our sense of beauty. The outlets for beauty in art expression in the average school system are many. Why not use your art principles in every expression possible?

Children's interests and activities are largely stimulated by their environment. School and community interests offer ample material

for art expression. Begin at home and search for the beauty spots in your own surroundings whether your home be in the city or in the country.

Every country has its individuality. In Oregon's land formation we find a varied sky line and in one of our grand mountain ranges stands a symbol which is known to many a traveler—the majestic form of Mt. Hood. Great masses of timber clothe these vast mountain sides through which highways have been constructed. Volumes of water force their way over mountains and precipices giving a charming freshness to all vegetation and beauty in the form of waterfalls, lakes, rivers and the great sea.

SLIDES OF OREGON AND PORTLAND

In conclusion let us look in on an assembly in progress in one of our Portland high schools. The program for the day is to give publicity to the June issue of their school annual. This issue is of vital interest to the entire student body. Preceeding the usual platform talks, the slides made by the art students introduce the most important topic of the day.

SLIDES OF POSTERS, CARTOONS AND ADVERTISING MATERIAL

If we carry with us but one message let it be the relationship of Art to Life.

Art must aim high, develop a social spirit, move forward aggressively, be efficient, train for leisure, adjust itself to new needs, and Art must itself cooperate.

Report of the Committee on Terminology

BESS ELEANOR FOSTER

Director of Art, Minneapolis, Minnesota

THE Federated Council on Art Education consists of a small group of men and women who have been appointed to act as representatives of national and sectional associations interested in art education.

Perhaps there are some who are not familiar with the purposes of the Federated Council on Art Education, which are as follows: To initiate investigations and make studies in the field of art education; to draft conclusions and make recommendations based upon such studies; to publish the findings.

The Elementary School Art report was published first. This was followed by the Colleges and Universities report. And now the Terminology Report has come from the press. This publication is a most worthy contribution to a situation much in need of constructive reorganization.

Since we know that people in art fields have failed to agree on terms, we realize how difficult has been the task of Professor Whitford and his committee. Council members who devoted the most of the time of one meeting to the discussion of the tentative Terminology report, are most appreciative of Professor Whitford's excellent accomplishment.

Every person interested in any phase of Art Education should have a copy of the Report of the Committee on Terminology. This report may be obtained from Mr. Leon L. Winslow, Secretary of the Federated Council on Art Education, whose address is Lafayette and Carrollton streets, Baltimore, Maryland. The Terminology Report is sent postpaid for fifty cents.

As soon as it was obtainable, a copy of this report was placed in each junior and senior high school in the Minneapolis schools, and the teachers were asked to report on the use which they have made of the report. I shall quote from their comments.

1. "Information classified in the report is so complete as to make the volume useful in planning daily activities."
2. a. "Valuable reference for art educators."
 b. "Material on Design and Composition is especially helpful."

3. a. "Much of it is useful for theory work with senior high school students."
 b. "I am glad to see this movement toward a unified art vocabulary."
 c. "Incidentally it is a good check on our teaching objectives."

4. a. "I have used the Terminology Report for reference many times in class work."
 b. "The Chroma Club is planning to devote several meetings to a study of the Report."

5. "To date I have found the Terminology Report useful as a reference book. It is most valuable to have these various expressions conveniently collected in one book."

6. a. "The art teachers in our school state that personally they have found this report very interesting, and have made definite use of it. One teacher in her Color Study used some of the definitions in the report for her classes. Another teacher in an all-over letter problem used such terms as Balance, Harmony, etc. as motifs."
 b. "I looked into the report a second time when planning the Western Arts Association banquet stage show for May eighth. I wished to find if some of the terms might not be used in holding the show together as an art unit."

7. a. "I have used the report much in the same way that a music dictionary would be used."
 b. "In high school classes the definition of terms from pages 51 to 73 is helpful. Having the same idea expressed by different people often clarifies that idea in the minds of the pupils."
 c. "If the teachers were to look up these definitions in the various books from which they were taken, it would be quite a laborious task, so even though one possesses the books from which they were taken, it is a convenience to have the definitions in one volume."

The Pressure of Modern Educational Teaching Requirements in Relation to Art Courses Leading to University Degrees

WILLIAM H. VARNUM
In Charge of Courses in Applied Arts, University of Wisconsin
Madison, Wisconsin

THE PRESSURE

IT is an established and unescapable fact that throughout the country educators are exerting persistent pressure in an endeavor to establish educational requirements for the teaching of industrial arts, home economics, and art, raising the teaching standards for these subjects to a degree comparable with other subjects in the curriculum, as English, language, history, and the natural sciences.

With this thesis of pressure applied from without the profession as the theme, my talk concerns:

(1) Teachers with preparation inadequate to meet state requirements. Michigan art teachers must have 18 credits in education. Could you teach in that state?

Do you want to teach in California? Here are the demands made by the California State Board of Education for the special secondary school credentials in art. As you will note in *Illustration I,* it demands

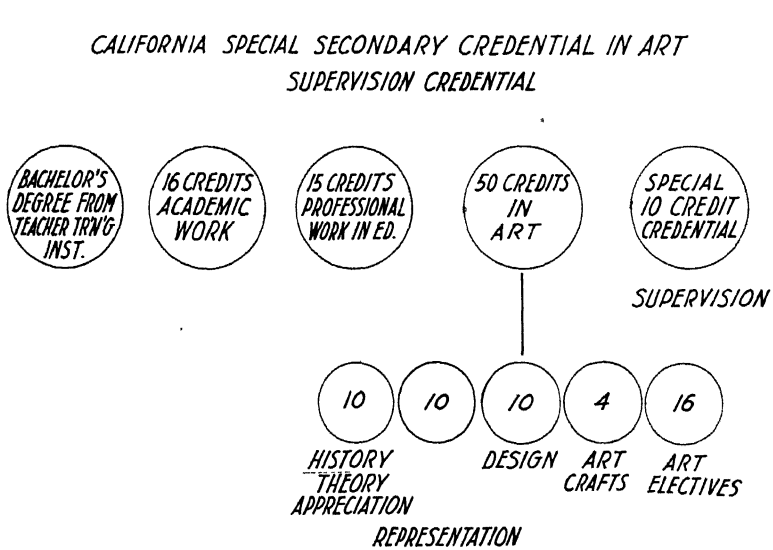


ILLUSTRATION I.

a Bachelor's Degree; 16 credits in academic work, 15 credits of professional work in education, 50 credits in art, divided as follows: 10 credits in history, theory, and appreciation, 10 credits in representation, 10 credits in design, 4 credits in art crafts, and 16 credits in art electives.

If you want to be a supervisor of Californian elementary and secondary schools, you have to take 10 extra credits in education supervision, and in addition to the 4 years for the Bachelor's Degree, it usually takes one year more to cover the supervisional requirements.

(2) Teachers who want a degree and through compulsory summer attendance have secured a few college credits, which, added to some normal school credits or many technical art school courses, may give them Junior college standing.

(3) Teachers who desire to advise their pupils in matters pertaining to college courses.

(4) The teacher who frankly realizes he is underequipped.

(5) The teacher who in order to secure permanence and teaching advancement, must secure a first and possibly a second degree.

It is increasingly difficult to advance without some sort of first degree from a reputable institution. All of you know of cities, normal schools, colleges and states requiring masters' degrees of their teachers. When seen from one point of view, there is a degree of sympathy for the art teacher, who mildly applauds a popular lecturer for jeering at art degrees. From a different approach, educational authorities believe that this teacher *needs* a broader background of understanding and tolerance, in order that she may become more efficient as a teacher of the liberal art of today.

THE CHALLENGE

This movement towards higher educational standards has placed the art teacher in a difficult position, harder than is the case with the industrial education and home economics teacher.

Art teaching demands a trained eye, a skilled hand, and an inventive and well stocked mind. To this frequently is added ability to organize and administer.

If in their wisdom educators believe degrees necessary to the teacher of art, industrial art, and home economics, it must be accepted as a form of challenge, which, by giving the *teacher a broad cultural and liberal background* and stimulating contact with vigorous interests, is bound to react on subject matter, and place art teaching on the same academically respected plane as English or the natural sciences.

Industrial education and home economics teachers have accepted the challenge with more alacrity than is the case with art teachers. Their college courses are more uniformly stabilized, while their litera-

ture is increasing rapidly. There are evident and valid reasons for this condition. For one thing, their informatory material and contact courses are more concrete than is the case with art instruction.

Thus it is that the time for winnowing and sifting art information is at hand. This must be done by the clear thinking art teacher, equipped with the finest training offered in this country, working beside the associated arts of industry and the home.

TRAINING TO MEET THE CHALLENGE

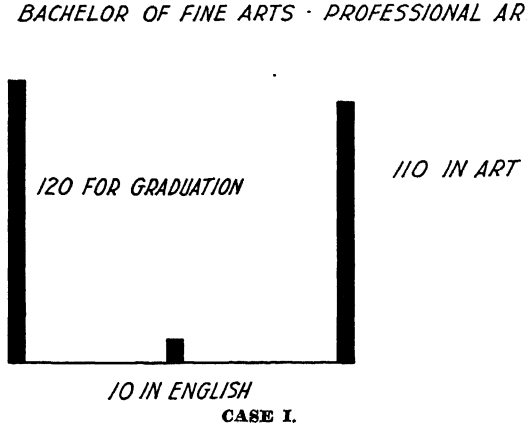
As my topic is university arts courses and their relation to educational pressure, it seems necessary to depict graphically the constituents of typical university degrees. In each instance the case is selected from one of the largest of the country's colleges or universities.

The term "credit" used in this analysis is defined as follows: Broadly speaking, one credit consists of three hours of work each week for 18 weeks, or a total of 54 hours. This may be divided in a number of ways. For example, one credit may mean an hour of recitation or lecture work, and two hours of preparation each week, or it may mean two hours of studio or shop work each week with one hour of outside preparation. Sixteen credits is a normal load which represents 48 hours of work each week for 18 weeks.

BACHELOR OF FINE ARTS

CASE I

Referring to the chart in Case I, it will be seen that the Bachelor of Fine Arts with professional objectives, required 120 credits for graduation, of which 110 may be taken in art and 10 in English. In another institution equally as large and well known, the ratio is slightly different with 125 credits for graduation and 16 academic credits distributed between English and a foreign language. A small number of educational credits equips one for teaching.



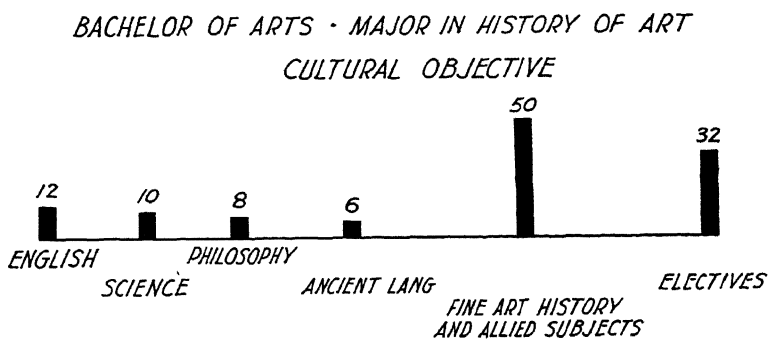
CASE I.

If we consider a college course as supplying the individual with broad, intellectual, and cultural backgrounds and stimulating contacts with courses other than art, it would seem that the awarding of the Bachelor of Fine Arts in Case I inclines towards the professional art school rather than desirable university training.

Another major objection to this type of degree is the fact that under this set up it is impossible to continue art education towards a master's degree. It can be readily seen that the academic preparation is entirely inadequate for graduate work.

BACHELOR OF ARTS—CULTURAL OBJECTIVE
CASE II

One of the most common forms of an art set up and one of the oldest is the Bachelor of Arts with a major in art. Usually this degree is connected with a major in art history. In the colleges of the country many college administrators consider art history as the highest possible form of art interpretation, apparently overlooking the fact that were it not for studio practice there would be no art history.



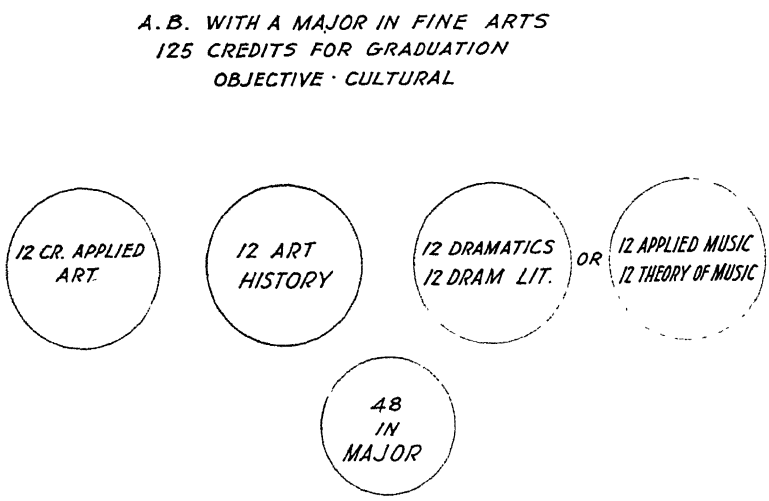
CASE II.

In Case II the objectives of the major in art history are cultural and there are no studio contact courses. Referring to the chart, it will be seen that the intellectual background is secured through contacts with English, science, philosophy, foreign languages, and by the judicious use of 34 electives. Public school teacher training has little connection with this type of course.

For this cultural objective, 50 credits out of the 120 for graduation are allotted to fine art history and its allied subjects. This course is offered by a famous eastern institution.

CASE III

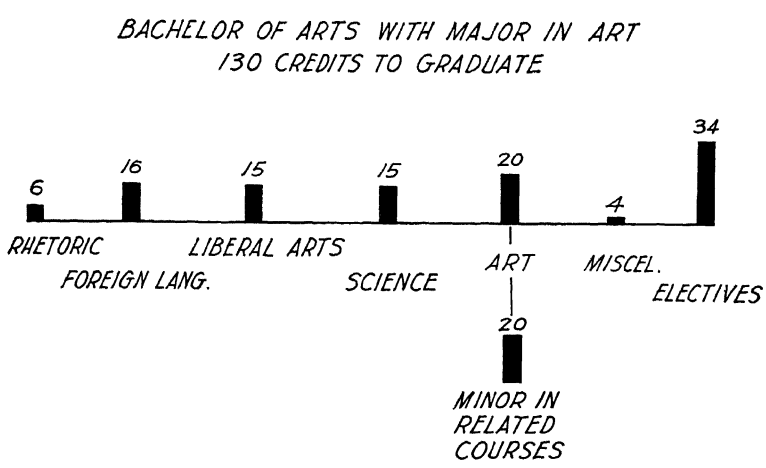
From the standpoint of the art teacher, Case III presents a broader, fine arts cultural objective, with its 48 departmental electives distributed equally in four possible activities in the fine arts.



CASE III.

CASE IV

Case IV is the last example of a typical Bachelor of Art degree, but in this case with a major in art practice. Throughout the college



CASE IV.

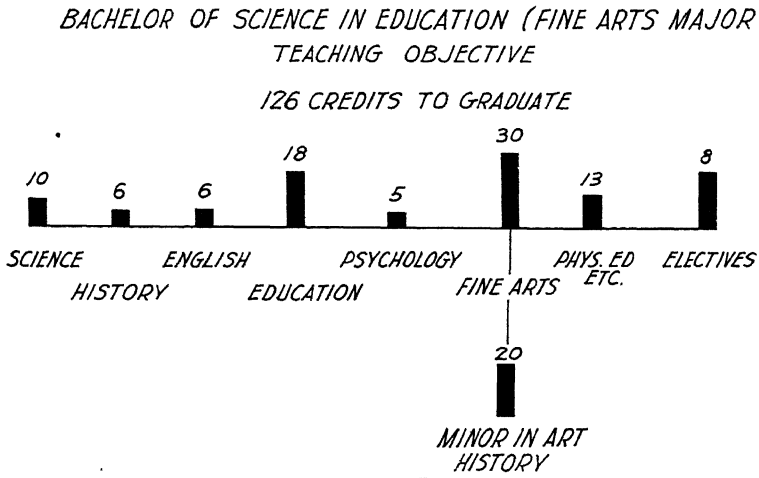
world you will find the Bachelor of Arts degree is considered as more or less sacred; not to be adulterated with an overdose of creative studio art practice. The home of the Bachelor of Arts degree is found in the College of Liberal Arts and so in referring to Case IV, we analyze a typical cultural set-up composed of rhetoric, foreign language, obligatory liberal art subjects, science, electives, and only 40 possible credits allotted to art and related courses.

It is interesting to note that there are only 20 credits which may be taken in art practice, while the 20 remaining credits constitute a minor in related courses. In other words, a person is supposed to be able to take this course and teach art with an equivalent of 1,080 hours including outside preparation. If one were to work eight hours a day, it would mean 135 days of practice or a little over half a year for teaching art. Including the minor, only a full year would be possible in all forms of art experience.

BACHELOR OF SCIENCE

CASE V

As much as a teacher may dislike a degree of Bachelor of Science as applying to art, nevertheless, it is a traditional, professional, and teacher training degree of the past and will continue so for some time to come. The term Bachelor of Science really includes courses with a clearly marked technical tendency. Schools of education usually grant the B.S. hence, it is realized that the art teacher receives much better treatment as far as credits are concerned in the Bachelor of Science Course than would be possible under the A.B. liberal arts plan.



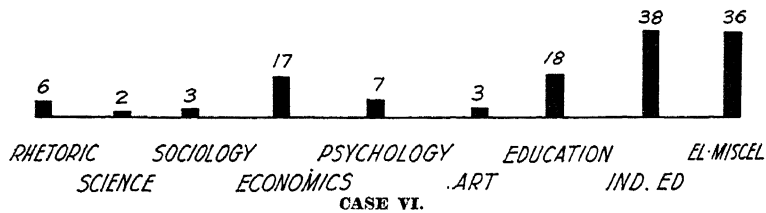
CASE V.

It is common practice for colleges to award to teachers the Bachelor of Science degree in Education with a Fine Arts or Art Education

major. In Case V is prepared a typical Bachelor of Science in Education set-up with English, history, science, education, psychology, and 38 credits in electives for the cultural background, 18 credits in the fine arts practice, 20 credits for a minor in art history, making a total of 50 credits in the field of Fine Arts, with an allocation of 1620 art practice hours. This comes nearer supplying the art teacher with adequate art practice. Eighteen credits in education meet usual state teaching requirements.

CASE VI

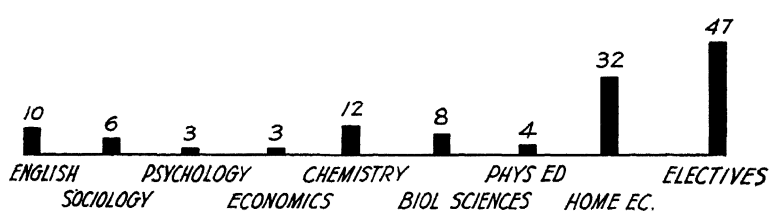
At this point I want to compare a Bachelor of Science in Industrial Education Course with a similar degree in the Fine Arts. Case



CASE VI.

VI presents an instance of this sort requiring 130 credits to graduate. Here we have a set-up comprising rhetoric, science, sociology, economics, psychology, education, 3 credits of art, 31 electives and miscellaneous subjects, and 38 in industrial education. It will be noted that the background subjects are increased in number, while the industrial education credits are 38, lower than in fine arts (Case V). Apparently skill is not so important to the teacher of industrial arts. I have a feeling that 3 credits in art or less than 2.5% of the total number is decidedly low. With recent industrial history as a criterion, art should come in for a higher percentage.

CASE VII



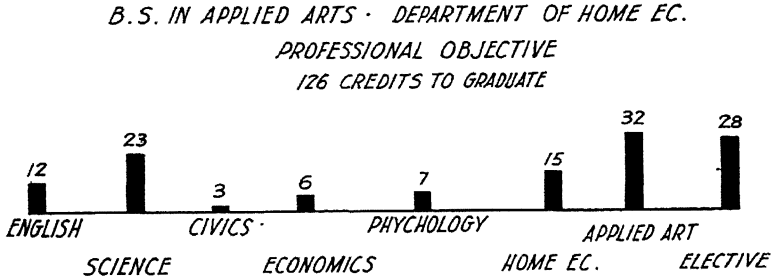
CASE VII.

In this professional field included within the Bachelor of Science Degree, it is noticed that home economics has a strong background of natural science. For instance in Case VII, we have English, sociology, psychology, economics, chemistry, biological science, physical education, and 48 electives. While 125 credits are required for graduation, 32 are to be home economics subjects. Compare Bachelor of Science in Home Economics with Bachelor of Science in Industrial Education, Case VI there is an interesting parallelism presented for consideration.

CASE VIII

Case VIII is an analysis of a Bachelor of Science in Applied Arts with a professional objective. In this instance the new objective in art education is a child of the department of home economics and is frequently seen under the name of related art.

One of the newest and rarest of developments in art teaching—it has had a troubled career, in as much as it frequently inherits the total amount of science required of the home economics food, or clothing major.

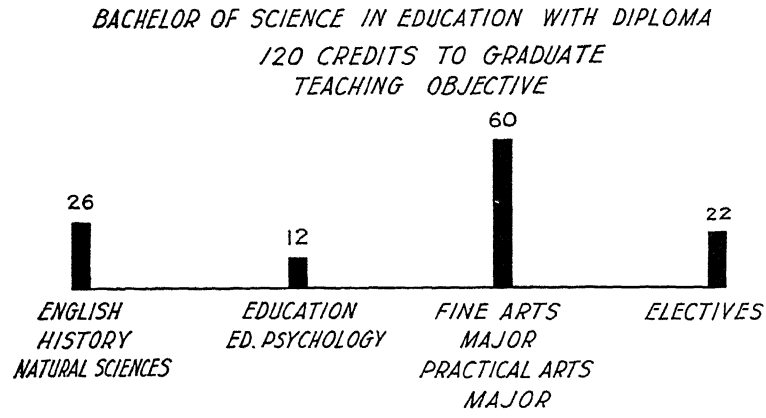


CASE VIII.

Referring to Case VIII, you will see the strange background for art, requiring 23 credits of science. This case is an example of an overloaded scientific background for the study of an emotionally creative art subject. In this instance, steps are now under way to correct this unbalanced situation.

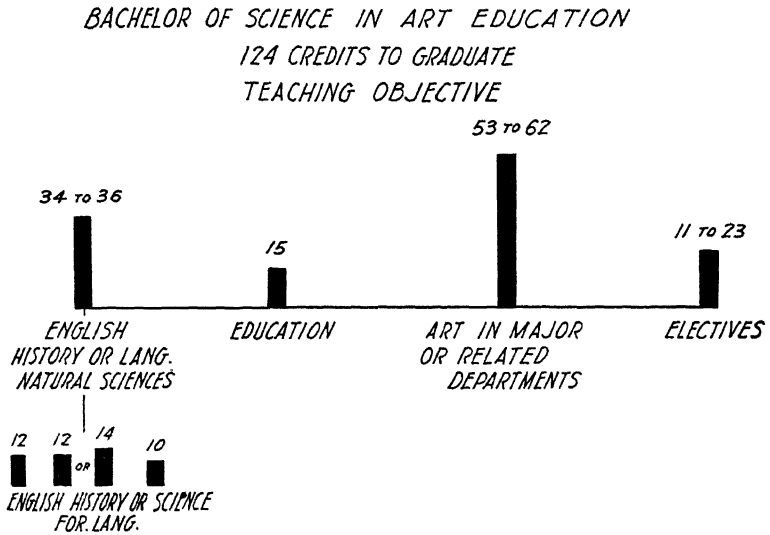
CASE IX

On this chart is illustrated a well balanced alignment of subjects leading to the Bachelor of Science in Education, with a special art teaching diploma. Out of 120 credits required for graduation, 26 are in English, history, and natural sciences, 12 in education and educational psychology. Twenty-two are non-art electives and 60 credits are required for the Fine Arts major. Certain college administrators



CASE IX.

consider a background of 26 cultural credit requirements as inadequate for the teacher of art or any other subject.



CASE X.

My own course, that of the Bachelor of Science in Art Education, requires 124 credits to graduate and is divided as follows: 34 to 36 credits (an increase of from 8 to 10 background credits over Case IX) in English, natural sciences, and history or foreign language, 15 in education, 11 to 23 possible electives, and 53 to 62 in art or its allied subjects.

SKILL, POWER AND KNOWLEDGE

Here, I wish to state that I may be old fashioned, but I believe a teacher of art should be able personally to draw, to paint, and to design. Whereas the teacher of history, of English, or the natural sciences, does not necessarily have to possess the keenly trained eye and the skilled hand, the teacher of art must have these as well as the organized mind to meet the challenge of her subject. To meet the anticipatory demands of pupils, to control a situation, she must be able adequately to demonstrate her art before her class. For her own private advancement she should be able to continue her professional accomplishments.

I consider it absolutely essential to devote between 50 and 60 hours purely to the teaching of art history, art theory, art practice, and guidance in its various forms. Even with adequate high school training, it is just possible for the average person to reach a degree of efficiency within the 50-60 credit range. To oblige a person to teach with 40 credits preparation, or in some instances on 20 to 30, is in itself absurdity, but one of the hardest forms of absurdity of which to convince an academic college faculty.

Before considering graduate courses, may I urge the teacher who contemplates or is advising college courses to keep 7 points in mind:

1. Is the college of recognized standing? Does its degree receive recognition from school authorities and educators?
2. Is there a well balanced and adequate non-art background?
3. Are the education courses sufficient in number to fulfill state and local requirements?
4. Is there adequate professional training in art theory practice and history? Are the art offerings limited to the art department, or is one allowed to select courses from a wide range of offerings?
5. Will the undergraduate preparation admit you to graduate standing in American universities?
6. In advising pupils to continue, use judgment. Some are not fitted for college work. Others may with profit take two years of college work and then enter a professional art school. Do you advise the A.B. or B.S.?
7. If you decide to go to college, don't try to "shop" your credits around from college to college until one finally agrees to allow you full credit. Write to your state university for evaluations and you will generally determine the treatment accorded your work by other universities of established reputation. Make up your mind to lose some credits. It is inevitable.

GRADUATE WORK IN ART

Of the three art training attainments of knowledge, skill and power, the first two normally are acquired in the undergraduate fields. Real power, the ability to do and think constructively, comes

through graduate activities. Unfortunately for the teacher of art, while graduate work in art history with its accompanying M. A. degree frequently is encountered in the college curriculum, there is no subject on the graduate level which has received less recognition than has the subject of art theory combined with practice. Emphasized graduate art theory and practice courses are found in but few institutions, yet from the standpoint of the teacher of art, these courses more and more are becoming vital to the rapid development of public school art education.

In this respect industrial arts and home economics education are more commonly encountered and better organized. Before proceeding with a description of the courses, I desire to point out five types of activities desirable to courses on the graduate level.

THE GRADUATE LEVEL

1. LECTURE COURSES · MATERIAL FROM ORIGINAL SOURCES

2. SEMINARS FOR CRITICAL ANALYSIS OF AN ORGANIZED FIELD OF STUDY

3. RESEARCH UNDER DIRECTION OF INSTRUCTOR

4. CREATIVE PRODUCTION

5. DISSERTATION CAPACITY FOR RESEARCH AND INDEPENDENT THOUGHT

ILLUSTRATION II.

GRADUATE ACTIVITIES

First, are lecture courses—In these courses the instructor is supposed to organize material from original sources and to translate knowledge so secured to the members of his class. New art instruction theories are presented for consideration and discussion, and new methods of approach.

Second, seminars for the critical analysis of an organized field of study:—for example, a discussion group to take up certain subjects as design, dynamic symmetry, the Best-Maugard design theory, the Claude Bragdon design theory, creative art schools, part time and trade schools, and so on, discussing the methods pursued, and the application of these principles to the possible school curriculum. In this course individuals are taught to think through problems for

themselves and to bring to bear upon these problems critical and appreciative judgments.

Third, research under the direction of the instructor—In this field art appreciation tests, vocational guidance problems, experiments with methods of approach and instruction, and other pertinent problems could be developed. For instance, many phases of the report of the Federated Council on Art Education could be developed in graduate courses, thus freeing the members of hard working committees from their tedious activities, or supplying machinery for industries and research institutional endowments.

As a proof of this, the Rice report mentioned in the report of the Federated Council was developed by an art undergraduate at Wisconsin.

Fourth. This point is one not generally recognized by college authorities, but in my judgment is worthy of recognition equally with any type of research work. I refer to creative production—acquisition of power. By creative production I mean the design and execution of such problems as mural decoration, municipal sculpture, architecture, invention of machines and processes, of new styles of dress, furniture, musical composition, and so on. I am positive that the productive imagination shown in the creation of some of these problems exceeds in value a great deal of the research work now conducted in academic graduate courses.

Fifth. The last point is the dissertation which puts in concrete words one's capacity for research in independent thought. In other words, in its written form it becomes a record of progress.

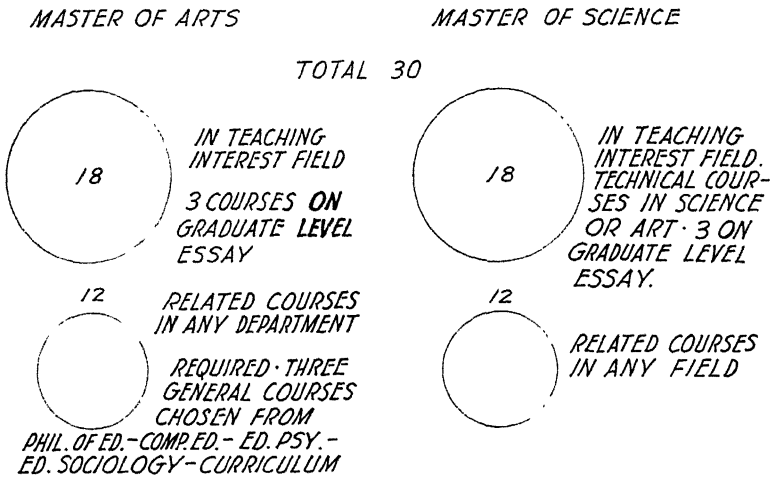
Of the preceding activities, one, two, three, and five are recognized as a part of the graduate level machinery, while point four is receiving growing recognition. These five points should be so allocated that graduate education is not too narrowly specialized in a certain art, industrial art, or home economics groove.

MASTER OF SCIENCE—MASTER OF ARTS

CASE X

To assist in breaking this narrow specialization, it is interesting to analyze a Master of Arts degree as compared with that of Master of Science. Both of these degrees are for teachers, awarded according to undergraduate preparation, and are in one of the largest institutions of the United States. In Case X the Master of Arts must take a total of 30 credits, constituting one year of work. Eighteen of these credits must be in the special teaching interest field of the individual, with three courses on the graduate level, (i. e., not open to undergraduates) and a dissertation or essay. Twelve credits are in related courses in any department. The Master of Arts degree has certain characteristics. It must maintain the character of undergraduate

liberal education. In this particular instance, three general courses must be chosen from philosophy of education, comparative education, educational psychology, and educational sociology.



CASE XI.

Usually following a B. S., the Master of Science degree is much freer from restrictions. Eighteen credits may be taken in the education teaching field, chosen from the courses in science or art, with three in the graduate level, and an essay, while twelve may be selected from related courses in any other field.

CASE XI

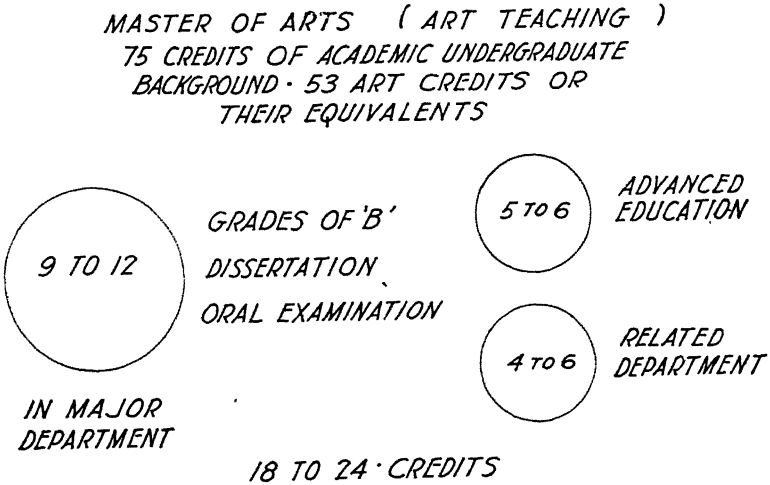
Case XI is a typical Master of Arts degree with history of arts as major. This course has generally been preceded by an A. B. undergraduate history of art preparation. It presupposes a reading knowledge of one foreign language, which is the usual custom in cases involving art history. Thirty semester hours are required for graduation, with twenty in the major and ten in a minor or related field, "B" grades, a dissertation, and an oral examination.

CASE XII

Another type of course of Master of Arts with the emphasis on art teaching requires 75 credits of academic (non-art practice) courses and 53 art credits, or their equivalent, for entrance. Division of the work calls for between 18 and 24 credits to graduate. In no way is this an easier course than one demanding 30 semester hours because the work is proportionately more difficult. Nine to 12 credits are required in the major department, 5 to 6 in advanced education

courses, and 4 to 6 in courses of related departments. The Wisconsin second art degree is quite similar to this plan.

In addition to this no grades below "B" are counted, and an oral examination and a dissertation or thesis are required.



CASE XII.

Courses thus outlined are similar to those demanded of many teachers. Discussion of entrance requirements for graduate courses which vary with different institutions, will unduly extend this paper.

Without Masters degrees, many good teachers may stay on the present economic and professional level for many years to come. This would be unfortunate because at the present time, art is being subjected to the microscopic scrutiny of education authorities, school boards, and superintendents. Unless it justifies its existence, unless teachers take a sufficiently broad attitude regarding research work as concerns their vital problems, unless the best minds of the country are applied to vital art problems, the art teacher will be outstripped by teachers in home economics and industrial education.

These latter lines of work just mentioned are developing rapidly. Their literature is growing. May I urge all, that the art teacher take this question of art education seriously and look upon continued education as a means of creating, of solving art education problems,—in other words, in placing art on the level it deserves—of co-ordinate rank with the older and more thoroughly established subjects in the teaching curriculum, thus justifying the pressure from sources outside the profession.

Applied Modernism

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of Lighting Fixtures
Chicago, Illinois

AS THE title of my talk implies past tense—*Applied* Modernism it will be quite necessary for us first to come to an understanding as to what we mean by "modernism" and then apply it. In this I hope to interpret for you my idea of modernism rather than give you an indifferent composite definition of it.

The term itself is unfortunate and only with hesitation, and bearing in mind its general use do I use it. This great movement forward certainly is limited by the word. If it bore no title at all perhaps it would not be in such a confused state in many minds, nor the vehicle for so much abuse.

At any rate, this so-called modernism does not mean shooting stars and triangles, warring lines and the like. Certainly it is not the insane thing many think it to be. Rather, I hope you'll discover or have already discovered it to be its true rational, practical self.

It *is* difficult to put one's finger on—hard to say this is modern, that isn't. The reason is obvious: anything that grows is modern. Modernism is not new. We even find it sometimes but a perfect twin to Early Greek or Medieval art, although I believe never as at the present time has art been so varied. Today art has a thousand faces.

Modernism to me is an extremely general thing. Vast, unsounded, individual and practical. No one word quite expresses it as well as *freedom*. Like in government, freedom meant revolution, accounting for many apparently strange, erratic things that may have occured.

To expand on this, I mean freedom for natural individual expression—freedom whereby each being can say what he will in art. But it also means freedom plus rationalism. Freedom with thought.

With thought emotion drops away. So through rationalism it becomes a philosophical matter rather than an emotional one. Emotion, you know, does not last on canvas. It thrills us a moment, yes, but only thought brings power to our creative work to make it permanent.

Not long ago I read from a work which said something to the effect that the reason people still stood in awe of primitive art was the thought force which the primitive peoples put into their creative work. The native only made an idol or talisman to wish someone well or evil or to pray. These not being matters for amusement, he used all possible thought concentration in constructing the object. You

might be interested too in the author's further statement that force made art and that someday in the far future, one coming upon a present day airplane motor, isolated, would remark, with all reverence, upon the strangeness of the art of the past.

Strange that given utmost freedom a person or thing formulates itself into the simplest sort. Simplicity is the inevitable outcome of freedom. Need I point out that modern art is just that. Simplicity also results in frankness which is apparent in modern literature, drama and music as well as in art.

All this has no doubt been necessitated by contemporary living. The many conveniences of today lead us to eliminate all that is superfluous making way for speed and comfort. The latter is reasonable but the former—beating time—I suppose is only due to our avidity for money. Nevertheless, it certainly is logical that the modern woman simplify her dress and furniture. How do you suppose today's slender sportswoman could possibly sit comfortably in a chair designed for and influenced by fat Queen Anne who wore yards of cloth and lace. Is it a wonder—but perhaps I flatter myself—that I'm a rabid, thinking modernist? At any rate, simplicity does bring refinement.

This modernism, in fine, is limitless because it hinges entirely on individual expression and how limitless the number of individuals, each becoming his own thinking, creative artist!

What has all this to do with your art teaching?

The art teacher today has all humanity in her hands. She, or he, can have more to do with developing the perfect civilization than any other, I believe.

What sort of influence will this modernism bring then. It means first, of course, a new angle in teaching, for which there is a reasonable need right now.

Regard your class of children. What will they become in thirty more years? Some will develop into mechanics, others business people, etc., with perhaps one artist among them. Are you training them all as artists or are you helping them make art a solid part of their lives to improve and beautify the work they are to do for the future. Teaching the airplane mechanic to draw and paint certainly won't make the engine of tomorrow more beautiful, but to help him as a child develop a natural selective sense of the beautiful, would, you may be sure, do much. With each individual making art a part of himself for natural everyday discrimination, this material world would be lifted entirely into the realm of beauty. Unfortunately the present situation, wherein the individual depends on people instead of upon his own thinking self, is a sad one.

Modernism is the connecting link. From art in a so-called high form—the art of the galleries which a meager handful sincerely feels and admires—to the living art for everyone in every day things is a

matter of education, and nothing short of this movement I've outlined as modernism can accomplish this. If only you all realized what an interesting, particularly fortunate position you are in! So much for the practical need for a new attitude in art teaching.

Now we approach what might be termed my ideal angle. I believe we are steadily marching on to that perfect state of being—a Utopian civilization. The future holds a perfect man. I further feel that in a Utopia art in the abstract does not exist but that it is an essential part of the individual life. How else could the individual be independent; and freedom and independence are of utmost importance to such a state.

This is not a unique idea. You will find in Bulwer-Lytton's "Coming Race," and I have no reason to doubt the esoteric sincerity of the work, reference to something similar. In the story the author, as the leading character, finds the ideal civilization to have no art in the abstract—he even finds the portraits in the historical galleries becoming decadent in the more recent years—but sees the people rather indulging in painting for individual amusement only. Further, in one incident he is impressed by the beauty of the plows used by the tillers of the soil and discovers art to be a working part of everyday life there. Everything was beautiful—even the tools. I cite this as a matter of interest not as proof, though it is of importance to find so great a mind as Lord Lytton planning the art of his perfect state in this way.

All this leads up to the matter of training for the future. These children in your hands can be led on to a perfect state, not in a generation to be sure but to the future, nevertheless.

Consider ourselves; were we trained, as children, for the future? I doubt it. If we had been perhaps America would have been admitted to the Paris Exposition in 1925 instead of being left out with no creative art of her own. Perhaps we would not be manufacturing and buying radios hidden—as if we were ashamed of our mechanical progress—in Italian Renaissance cabinets, as if Savanarola had twisted the dials with ease! Perhaps we wouldn't be delving into the art of the past and proselyting what we find by forcing it to fit modern living conditions. Perhaps our electric lights would be frankly what they are instead of synthetic candles and candelabra. What an hypocritical age this manages to be! We would certainly not be lagging in industrial art if we had been trained for the future. The child of today should expect like progress tomorrow.

Maybe we can catch up. By training the children in the proper art attitude we can help them to more beautiful and, I'm sure, more sincere lives, at least.

Perhaps this is preaching—making a plea for a struggling humanity. I can't help it; it is sincerely what I think. Think what the chil-

dren can do tomorrow if art is part of them. Think of how their homes will brighten; of how industry will be affected all through this natural selection of the beautiful from the unbeautiful; and to me it is simply a matter of choosing the thoroughly useful as the beautiful. It makes a nice little game—finding beauty in pure function and usefulness. Try it.

Now, first of all this demands that you as a teacher be sincere. It means also that every teacher help the child or individual rather than dictate to that individual. Every child has a natural artistic instinct—something intuitional in the manner with which he makes selections of beauty. He responds quickly to the stimulus of nature too, at an extremely early age and nature is a form of beauty. I believe all we have to do is be aware of this instinct in every child, help him express it, holding that naivete which makes way for later studied simplicity.

Do you know that the philosophers, including Plato, thought that to be a philosopher one must be as a little child? Each child *is* a minor philosopher and artist but all through life, in school and at home, he is given formulas, and standards of beauty and gradually all that is natural is crushed out of him. Facts, facts and dictation is all he hears until finally he is almost afraid to think for himself. Helping the individual develop his natural self is of utmost importance in applying modernism to teaching.

Making art a part of the child's life cannot be accomplished through picture study nor painting and drawing, which is only a matter of aping nature. Rather I should say it means bring out the child's creative self by keeping him thinking and making his art lessons and exercises extremely practical and applicable to his clothes, home and person.

Three dimensional work can accomplish much in this way; industrial art which is art made practical, construction and building. In short work that is best for the child is both useful and beautiful.

Further, this will involve in your teaching knowledge of the natural laws of color; practical application of color forces—what red does to green, etc. The child knowing all that color accomplishes in a reasonable way can use it to further his own individual end.

The same is true for the psychology of line. Teach him the force of a straight line, what a curve does, how lines influence one another and the individual as well. Teach him to use this knowledge in his daily purchases, in selecting clothes for example.

Decorative knowledge would be extremely useful. Design in the abstract should be taught. Help him to create new shapes and forms and not to depend on flowers and leaves in design. Keep it as abstract as possible and therefore theoretic so that he can apply it in an un-

prejudiced way to his possessions. This develops the individual, allows him frankly to say what he believes and thinks at all times.

Give the student a theoretic ruler, under all the little lessons, one that he can hold up and measure all that he contacts. Help him to find and recognize beauty in the commonest things.

Art, then, must be made a part of living before it can do much for man. It must be beauty and efficiency at once. It must be a natural state for tomorrow's man if humanity is to move on. It must be no effort for him. I sincerely believe if this were true, if all man's active background were beautiful, this life would not be the battle it is.

Adjusting Art Education to Modern Life Through Home Decoration, Dress, Industry, and Amusement

FRANK ALVAH PARSONS

President of the New York School of Fine and Applied Arts

(The first words of Dr. Parson's address are in answer to the very hearty applause which greeted him as he rose.)

THANK YOU! Twice in a man's span of life he may, I think, rightfully, justly, and in good taste, have a thrill. It is first in his childhood, while his illusions are with him. The second period is in his second childhood when illusions are no more, sophistication has set in, and he is willing to return to fundamentals. I am having a thrill. It is an honor and a pleasure for one in his second childhood to come back to his old friends, perhaps making some new ones, and the very fact that you are so enthusiastic so late at night, with all you have gone through, makes me know you respect and perhaps, have affection for the speaker.

The subject that your committee has given me to talk about, seems to come under five heads.

First, there is the matter of education, to which we all committed ourselves, some of us long ago and some of you quite recently. It is called education, this process we have given our lives to.

Second, there is the matter of life itself to be thought of. That mysterious span of consciousness in which every man and every woman thinks about things and does things.

Third, there is art. Have you any idea what it is all about? I have just as much idea what art is about as the movie actor has. It is the same thing. We are all filled up. Let us see if we can straighten that out.

Fourth, there is this question of modernism. How wrought up we are about it! But my grandmother was a modernist. She lived through it in her day and she went through it in Boston. She had a cousin, long before who dared to do something beside teach school, and she got away with it.

You know there has been modernism ever since the world began. Cleopatra was a modernist. The Renaissance was due to modern ideas. The eighteenth century was a period of extreme modernism or we should still be doing as they did at the Court of London. Victoria was a modernist, a queer one, so all her followers were modernists. There was a period of modernistic furniture.

People make love now on the sidewalk instead of in the parlor. They are just doing it in another place. You see life is not different. Its expression now is just a little different from that of twenty years ago, but the idea of modernism is not a recent one. It is as old as the hills.

The Fifth subject we want to talk about tonight includes some of the phases of modernism into which we find ourselves plunged in such a way that our only choice is to adjust them to our needs, or to adjust ourselves to their requirements.

To go back. One of our greatest problems is the adjustment of an individual to the environment in which he finds himself. If I find myself in 1930 in Minneapolis I shall find a different environment, a different attitude to domestic life, a different attitude to work, a different attitude to industry, an increased idolatry of money, an increased desire to have a radio. Being thrown into this I have to be educated into it or die because of it. Education aids the adjusting of one's self to any surroundings into which chance may bring one.

It is a common thing in Paris to see an American in the evening dressed in a tweed suit looking in the windows and saying: "New York is good enough for me. I don't care for this place." It is a common thing. People go through the Louvre at forty miles an hour.

One morning when I was there to give a talk on the Primatives of Italy I met a lady who teaches in a school in a state bordering on mine. She was rushing in with a group of girls. I said to her, "Perhaps you would like to join us."

She replied, "Maybe I would, but how long are you going to be?"

"I can only allow an hour and a half for it," I said. (That seemed to me a very short time.)

"Oh," she exclaimed, "we have only forty minutes!" and on she went.

The point I want to make is that I must be able to adjust myself to Paris if I want to get anything from Paris. I can't bring New York to Paris. They won't have it. If in London, I must adjust myself to England. If in Italy, I must adjust myself to Italy because Italy is

for the Italians and I am a guest. If I am in Minnesota or in Eau Claire, I have to adjust myself as I did the other night, to a new environment.

Friends, education is not all in the school. Our problem is not all with children. The problem of adjusting individuals to life is a great question for people who would make a contribution to life.

There are two processes. There is the process of training. We have here tonight two hundred teachers engaged in some form of art teaching. Art teaching, or any other teaching, is composed of instruction and of practice. It is easy enough to tell any one to be quiet. You may tell anybody, anything, you may instruct anybody, but if there is no chance to practice what you preach there will be no results. Training is a matter of instruction and practice.

Another phase of training, which I believe to be important in any cultural scheme is education through surroundings. It is difficult to live with a pig and not become piggish. Lie down in the street and you get muddy. Friends, morally, mentally and spiritually it is environment that makes us.

Among the people with whom we come in contact, a large number do not think of the environment of the child's life, of the decorative surroundings in the house, or of his clothes. In order to change the environment we have to change the point of view. As to life—life is made up of man's interests. It is the continual formation of ideas and their concrete expression. If I am dressed artistically I am telling the world what I know about art. If I am writing, the words I use tell the world what I know about written expression. In whatever I do I am telling something of that which is within me and the mental picture thus created is art expression.

Now all art expression is not equally good. All business is not equally good. Art too is a variable quality. Sometimes the expression of this quality is down almost to zero. Sometimes it can be raised by one who knows and by one who feels to one hundred degrees above zero. It is art all the same, art expression of man in concrete form.

Friends, when I get the idea firmly fixed that in education I am out to train children to form habits of thought and habits of action, then I shall be at the very root of training in art that will enable children to think art, to act art unconsciously.

Art is a double quality. Some talk and talk about the esthetic side; some talk and talk about the practical side. There is domestic art, commercial art, poster art, fine art, and some not so fine, but it is all art because it all expresses a man's conceptions put into form so that they can be used.

I saw a modern table not long ago. It was a dining table about twelve feet in length. The top of that table was one piece of wood—and you could never get wood of that size outside of the Yosemite

Valley—the base was formed by another similar piece. The design was new. It was original. It had in it all the wood it could hold. It was polished beautifully. It was a sight! It had no more relation to art than a pack horse has and it would have taken a pack horse to move it. A thing of art is created for a purpose but in that instance the purpose was never attained.

You cannot any longer make people believe that somebody who puts a Queen Anne leg on an Elizabethan chair and a Marie Antoinette love knot on the back of it is an artist. They know Queen Anne legs do not go on an Elizabethan chair and they are sick of Anne's legs anyway. In this day and age we cannot get anybody who can make anything out of the old that we want; we are impatient and so we create. I am asked to make a chair. The first thing I do is to ask: "What is the chair for?"

Last year I visited six countries to see what modern art was producing because you cannot belong and I cannot belong to this generation and still be doing mission furniture. We are not in that state of mind. You know some modern chairs are quite original. You sit down in them and unless your legs are six feet long you have to sit on the edge. I don't care how modern a thing is if it is good! I don't care how old a thing is if it is good, but I do care if I have to sit in a chair in which I cannot see my knees. So if a thing does not hit the nail, unless it functions perfectly, it is not in good form and it lacks the principle of art.

In the second place, we want beauty. I think it was Mark Twain who said that "beauty is that certain something that satisfies the esthetic appetite." Now if we want one hundred per cent beauty in art, it will be one hundred per cent. If a person wants three per cent beauty, I think we shall have to make that person over. We are out to raise the standard of esthetic beauty to one hundred per cent. When that purpose is perfectly clear and education is so planned that it leads up to this result, I do not care who the teacher is, or what the school is. Whatever contributes one bit to a child's conception of beauty is something good. We can supply the art features.

Now these two qualities together, suitability and beauty, I shall call taste. It is necessary now that we spring into the game as an organization and stand for good taste. Never was there a time when a nation was becoming more world conscious than ours. There never was a country with such resources. There never was a single time in history when a country led the world in scientific and mechanical progress as does ours. Now we simply have to keep our place in the world, jump in and get hold of what taste is. It is only by teaching that starts from the earliest date and continues throughout his life, that a child can attain a mastery of the principles of suitability in

everything and will become capable of understanding the advisability of beauty in everything. Only in this way can he acquire taste.

Taste has been defined as the right thing in the right place always. Very good, the right thing in the right place always. May I illustrate with clothes to break the monotony? Two years ago every girl was cut like the back of this chair. She was all the way down like that only the clothes did not go all the way done. But it was always a block. Some of them have not forgotten it but they would look funny dressed in that way now. If you see any of them you feel sorry for them. A year ago they started to bring down the skirts in spots, instead of bringing them down in a logical way and so around the bottom they looked as if they had been attacked by a bulldog. You couldn't say anything because they were ladies who wore them. In my State they are still wearing them, some of them. Instead of being worn at night only, you see them on the streets even in the morning, under the fur coats, dipping down in spots. There is not one hundred per cent good taste in that, is there? There is a place for everything and some things do not look well in public. By and by everything will be brought down. All the manufacturers of materials in America and Europe will be advocating it. How else could you spend your money? It won't be six months before every one will be down with these in the morning. They will think they are dressed up. I am giving this illustration because we must teach the on-coming generation what suitability is. Right now there is a place to wear certain clothes, there is a time to wear certain clothes, and there is a time not to. People must be told to do the right thing at the right time.

It is equally true of the house. I am going to try to prove in my topic tomorrow morning that Interior Decoration means the creation of a beautiful interior, of a house in which to be born and in which to live and to think. That is the problem, because it is the environment that is going to make the man.

There are three or four things that are in our way just now. They are hindrances because we make them so. First, there is the craze for a degree. You know that I have taken so many courses in my day that I don't know a thing. There are people that cannot get a raise in salary unless they have listened to me for thirty hours. They come to me and I write: "Miss Jane Smith studied under me thirty hours." We are subjected to so many things of that sort.

Then there is another thing. It is like verdure in Salt Like City. There is a new field of stylists. I know of a young woman, very beautiful, who does not know anything. She is styling stockings. I think she gets three hundred dollars a week for styling stockings. You art teachers will have to combat against the people who are going out into the world and calling themselves stylists. They don't

know what is good but since they call themselves by that term and dress well they go in and are hired.

We have to go back every time to the same old thing. Taste is the right thing in the right place all the time. Taste involves knowledge, a thorough knowledge gained through long years, by the habit of thinking and doing the right thing in the right place. One must, from the very beginning, teach beauty by presenting something that is beautiful, awakening in a child a desire for it. If he is not up to one phase of beauty take something else, something simpler, but before a child can get anywhere he must have a criterion. It is now, as a nation, that we must lead the world in art, as we do in other things.

Another thing, modern art is an expression of life. The young people of a long time ago were just as bad as the young people of today. The difference is that we were successful in not being detected and the modern generation is determined on being detected whether they are doing anything or not. They are not worse. They are just foolish from our point of view. They are going on a different tangent but the right qualities are there. They are ready and willing and all we have to do is to teach them and practice what we preach.

Another word about modern art. Let us be conscious of modern art, but let us not say—"everything to the rubbish heap that has not been done in the last twenty-five years." Some of us had fathers and mothers. Some of us had grandfathers and grandmothers. Jonathan Edwards was one of my ancestors. I am ashamed of myself when I think of it, but everything must have an ancestor. If you have come in contact with a very lovely person, you were the better for it afterwards, but you have not become like him or her because you never could be, yet you are changed. Coming in contact with anything beautiful leaves its mark on us, but we must not think because something is bizarre, because somebody never did it before, that it is good. We are in for modern expression and there is no denying it. You cannot turn life back to what it was. Sir Henry Irving, Minnie Maddern Fiske, Sarah Bernhardt and Duce, if they were here, could not get a crowd of twenty-five, while Bebe Daniels or Constance Talmadge could get five thousand to an eight cylinder reel to tell them what love is. The point of view has changed.

Modern art is doing three things: teaching people to create instead of to copy, and it is teaching them to simplify things. It is searching for new materials, for new ways, for new incentives for producing things; but whether we seek as an organization, or seek as individuals, this holds—taste is the right thing in the right place at all times—and we have committed our lives to the promulgation of that idea. Thank you.

Principles of Design

HERR HOFFMAN
Munich, Germany

Introduction by J. C. LAWRENCE, Assistant to Chancellor Coffman, University of Minnesota. During the university year this institution is honored by visits of men from the other side of the world, by men of distinction in many lines, and increasingly we have come to enjoy gathering in this particular building with men who have attained fame, and are making us feel that this is a place where we can do beautiful things in a rather stimulating way.

It is particularly fortunate that in connection with the meetings of the Western Arts Association it has been possible for us to have with us at the University of Minnesota one, who needs no introduction by name to you, a teacher of such merit in his own field that students have crossed the ocean to be privileged to sit at his feet and have brought back to us in re-creation something of the understanding of the technic of the plastic arts. He is accompanied by one of his students, Mr. Wessels, who has been with Herr Hoffman for the last two years, and has worked as his interpreter in his classes and summer schools. The lecture is first spoken in German and translated into English paragraph by paragraph, and Dr. Hoffman will be able to give this lecture in this way.

HERR HOFFMAN: Ladies and gentlemen, I am sorry that I am unable to express myself in your language. I am very happy that I am called to your beautiful country.

I must ask you not to consider me in the nature of a foreign emissary of a new intellectual movement. I have nothing new to set forth. I regret that time permits only a hurried, partial statement of the ground-work. I wish to demonstrate that these same principles apply to both old and new masters. I am merely bringing to life eternal principles known to the ancient as well as the modern arts.

The mystery of pictorial formation bears on the dualism of two and three dimensions. The actual thing is entirely different from its appearance. Reality is three dimensional, appearance is two dimensional. We see reality through appearance but appearance affects in us the reality. Space and volume of nature appear other than they really are. The seeing process is based upon appearance. The appearance process bases itself upon the effect of appearance. Appearance is at the same time entirely different from the effect which comes from it. So the elements of presentation do not possess in themselves the effect of the intellectual content of the finished work.

This is only a fundamental beginning for the creation of form. A thing may appear small and nevertheless be great. A real thing

may be very large but small in appearance. A mountain in the background does not lose its appearance in spite of the garden fence in the fore-ground which, perhaps, appears large in contrast to the mountain. If the appearance is copied in the drawing, the effect of size may not be realized. Indeed, the mountain so drawn or painted will not only seem smaller in the picture than the fence but this negative effect will increase in the pictorial presentation.

The effect of every presentation of form is subordinate. The feeling experienced, however, cannot be based only upon observation for if things are other than appearance and this appearance affects in us concrete things, we must admit an inner vision; this condition that we have over and beyond our sensibility, a capacity for feeling into.

Nature has wisely limited our senses. The physical eye sees only the door but the inner eye sees through to the corner, experiences space, based upon the imagination, comprehends the living unity of all things.

The future shows itself to us, as life in its surface tensions. Space isolates and at times space is filled with tension, tension of light and color.

Appearance and space come about through the objective feeling of the subject. If we carry over this impulse through the essential, formal creation results.

The plane is the foremost element of all the arts of imagery, the whole of applied art. The line is not the formative element because it is only the aspect of the plane. The line arises from the coming together of two planes. Only in the imagination can a line remain isolated, alone. Lines support, bind together and flow. The plane and the painted spot are continually bordered by a multiplicity of lines. We may lose ourselves in the multiplicity of lines when we lose the sense of planes. We can lose ourselves in a multiplicity of forms if the forms are not linked together in two complexes. We must think in complexes and forms. We must build with planes although we can only draw lines.

I wish to illustrate my discussion thus far by means of a few slides. (The slides were of paintings by Michael Angelo, Rembrandt, Greco, Raphael and many other famous persons.)

I hope we may have opened the creation of the picture plane for you. I thank you very much for your kind attention.

The Art Teacher and Academic Tradition

DR. JOHN SHAPLEY

Head of Department of Art, University of Chicago
Chicago, Illinois

THERE is a popular belief that art is an aristocratic study. But it is quite the contrary. It has penetrated into the academic world from below, not from above. If we were a conservative people with a rigorous aristocratic tradition of instruction, like that in England, penetration of the study of art into our school system would make much slower progress. The growing prominence of the study of art in America is a signal triumph for democracy.

For art is not purely intellectual: it has an emotional and a practical aspect. And in the past these two unintellectual sides of the subject have been more or less vigorously urged against it. But to the credit of American educational institutions it can be said that they strive to build personality, not merely intellect. The study of art, because it is so many-sided, is a great builder of personality.

Art has been disparaged as manual. As if the human hand had not been mistress of the human mind! Art has been deprecated as proceeding from the imagination rather than from the reason. As if imagination were not the motive power of conduct while reason merely offers the subsequent explanation!

Those who protest the study of art because of its unintellectual and manual character are merely echoing an ancient tradition. This traditional protest rests on a system of thought and a state of society that have long been antiquated. It reflects a way of thinking proper enough, perhaps, to the ancient Greeks with whom it originated but meaningless in our democratic order. The Greeks classified the arts (in the broadest sense of the word) as the free and the unfree. Among the unfree were those which we call the fine arts. These resulted in products too concrete and material to seem free to the speculative idealizing of the Greek philosopher; indeed the modern philosopher who deals with the fine arts is apt to try to avoid their products—works of art—and make the arts themselves bloodlessly abstract activities.

The fine arts had to the ancients an even more serious drawback. They were activities pursued for a livelihood. This pursuit was attended by physical exertion. The fine arts were a compound of craft and sweat. As such they seemed to have about them something low and ignoble, something unworthy of a free man. This point of view was natural and inevitable, given the thought and organization of a

militaristic and aristocratic society always conscious of its dark background of slavery and social caste. And only democracy has escaped this background.

The dignity of toil is a new idea. Among the ancients physical labor (except in warfare) was humiliating. We find the some attitude widely diffused among less advanced peoples like some of our Indian tribes, and it has died hard, when it has died, among civilized peoples. It is entrenched in literature and religion. Does not Genesis hold it to Adam's discredit that he ate his bread in the sweat of his brow? Was it not shameful for Eve to spin? Nowadays I suspect we would be covertly glad to escape the monotonous irresponsibility of the Garden of Eden, glad not to leave everything to nature any longer but rather to indulge our taste and talent for the arts—even at the expense of some exercise. But such a preference represents a new state of mind and a triumph for democracy.

The division into free and unfree arts was easier to make than to get rid of. It was singularly persistent in the history of thought. The free arts (always meaning the arts which a free man—a gentleman of leisure—might properly cultivate) were, as commonly conceived, grammar, dialectic or logic, rhetoric, arithmetic, geometry, music, and astronomy. To avoid misunderstanding let me hasten to say that music in this sense meant the mathematics or theory of music, not its practice.

These seven arts were naturally in a favored position, which their protagonists jealously guarded. The seven formed a clique that resisted the intrusion of others which were proposed for membership, such as medicine, championed by Galen, and architecture, championed by Varro. The fancied completeness of the charmed number seven probably helped to resist such additions. The other arts whose candidacy was urged were, moreover, subject to suspicion because of the practical and wage-earning side they possessed. This situation is particularly clear in the case of medicine. To this day you can ask a musical acquaintance of no matter how costly and extensive a musical training at home and abroad to play at your wedding or funeral without charge, but can you get your physician to perform, or even appear, without a fee? As to architecture, which the ancients, I think rightly, did not try to differentiate from building, Plato had listed it directly after cobbling. From Plato this was perhaps not so derogatory since he calls the works of painters and poets lacking in reality as compared with a tangible boot.

To follow the individual fortunes of the lucky seven arts would be amusing and to some extent instructive. In the case of music we could trace through the Middle Ages the enduring and somewhat stultifying influence of the mathematical prepossession; in the cases of astronomy, logic, and rhetoric we could sense for centuries the in-

fluence of their traditional prestige. But it is enough for our present purpose to sketch only the family history of the seven.

In the course of time thinkers became aware of the disparity of these thought children of theirs, the seven free arts, in much the same way that parents become aware of the disparity of their offspring. The result was a differentiation between the literary trivium and the mathematical (or scientific) quadrivium. But the seven clung together as the *universitas litterarum,* the mediaeval university. The Latin for free arts is *artes liberales,* liberal arts. These are the arts of which the mediaeval university made its students bachelors and masters, and our modern degrees are but an echo of the same. We still have plenty of colleges of liberal arts, though the family division just referred to has caused them frequently to be called colleges of arts and sciences or colleges of arts, letters, and sciences. Covered with the barnacles of centuries the old hulk of the charmed seven is still recognizable in the modern university.

The Middle Ages with its passion for orderly categories drew up a variable list of seven unfree arts to correspond to the seven free arts we have been discussing. These were known as the *artes mechanicae.* They have no such lasting family ties of proud history as do their counterparts. Like abandoned children they could only envy and hope for adoption. And this is no empty figure of speech, for the mediaeval etymologist Hugo of St. Victor demonstrates their bastard origin by a singularly wayward and artificial derivation of their epithet *mechanicae* from the Latin *moechus* (adulterer). Even disadvantages of birth can be obliterated by merit. Thus medicine, which had its own compelling powers and protagonists rose to the dignity of one of the university faculties on the Continent. In conservative England, however, this did not take place at those hearths of tradition, Oxford and Cambridge. Can we wonder that in spite of the Slade Professorship the study of art should languish at Oxford and be practically non-existent at Cambridge? Medicine made its way rather slowly in America also so long as our higher education was more exclusively under British influence, and it is only within the memory of those now living that with the rise of Continental, especially German, influence our present conception of the place of medicine became possible. It is surprising to think how recently our medical schools were operated as a sort of university extension.

While medicine was advancing in the mediaeval university, jurisprudence was attaining an analogous success, but for a somewhat different reason. It came into its own as a kind of playmate of logic and rhetoric, a circumstance that still explains a great deal in the legal profession, such as the frequent emphasis of persuasion and argument rather than reason and right. Meanwhile, painting and sculpture remained ingloriously among the *artes mechanicae,* along with seaman-

ship and agriculture. They had been vainly proposed for membership among the free arts by Galen. His recommendation was quaintly revealing: both could be practiced in old age, even with declining health, unlike more strenuous activities. In other words they were almost white-collar jobs. Not quite! In Lucian's dream he chooses the noble Dame Philosophy and throws over Wench Sculpture because of her crudeness and dirtiness. As late as Leonardo we find the requirements of great physical strength and strong appetite for marble dust urged as proof of the inferiority of sculpture. In view of this persistent aristocratic tradition is it remarkable that the academic oligarchy has felt and continues to feel very circumspect in regard to the fine arts and that it should still be necessary to demonstrate their place in education?

Their opportunity, however, has unquestionably come in the education of a democracy. Both in kind and in extent it is an opportunity without historical parallel, and the art teacher has more influence, perhaps, than any other member of the faculty in the development of a truly democratic spirit in education. Opening the doors of education to all alike does not make it essentially democratic. As long as our aim is to keep the curriculum as uniform as possible and to turn out graduates who will be as nearly alike as possible, we are working against true democracy. In an ideal democracy all men are born free as well as equal, free to develop their individual natures as well as equal in their rights to assert themselves. Now there is no study more conducive to the development of individuality than art. This is unconsciously admitted in the common characterization of artists as "temperamental." This temperamental character so long cultivated in art in spite of derision is finally coming to be desired above all else, and in its encouragement the rest of the faculty is beginning to follow the art teacher. Every effort is being made by modern pedagogy to avoid the suppression of the student's personality, to bring out and develop his individuality. Such an attitude ought to bring fine results in art, as in the period of the Renaissance art blossomed gloriously under the cultivation of individuality.

METHUSELAH SAYS~

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Stagecraft Under Limitations

PROFESSOR S. CHATWOOD BURTON

Department of Art, University of Minnesota
Minneapolis, Minnesota

IF A LECTURER were asked how to run a house economically, he would doubtless be puzzled as to the best type of reply when realizing his audience consisted of wealthy, middle class, and very poor people. Any definite problem which he tried to solve might be of little interest except to the few; therefore, he might find it wise to speak about principles of economics, and allow each, by the application of the same to solve his or her own special difficulty. A somewhat similar line of attack will be used here, but first a brief resume will be given on how different individuals think and act when confronted by stage requirements.

A painter entering the theatre world naturally turns his attention to painted scenery, while an architect thinks first of building something which is structural, but a real artist of the theatre makes simple forms and vitalizes them by colored lights, thereby creating that which gives the best stage atmosphere.

There was a time when stage sets were built to represent houses and streets. Later the same effects were produced by painting on canvas, but during the last few years, there has been an effort to free the stage from the antiquated attempts at perspective and realism. Rakst used color and design to suggest the necessary emotional atmosphere in which the actors could bring forth their greatest expression. Other men are using screens, draperies, simple forms, and light rather than paint to create vitalized space in which to act. In the future there will be discovered a method of creating the illusion of solids by means of colored lights; when this appears columns, arches, and other forms will be transparent, or semi-opaque, and created by merely pressing a few buttons. It probably seems like a dream, yet nature is performing miracles of light every day. From the mountains of New Mexico, the light may be seen through the clouds at varied angles forming columns and shafts of irridescent colors, and at the same time there may be in the sky four rainbows—arches of color and beauty. When these two phenomena are perfectly adapted to the stage, the most economical and beautiful abstractions yet seen will be produced.

At present under existing conditions, economy is essential, so it would be wise to keep away from realism and plays demanding many changes of sets. This will save money and also time, especially that generally wasted between acts. In amateur performances, the most distressing things to contend with come during the long intervals between acts which inevitably break the continuity of the play.

The designer is sometimes expected to do the impossible, such as creating five sets for an outdoor performance, even when the opening act demands a set fifty-two feet in height, costing $1,500.00. In cases like this it is advisable to let one set remain throughout the entire performance, and add properties to suggest the necessary changes. If the performance takes place at night, lights can be used to reveal these parts of the set which are vital to the act. Changes of this character will eliminate waits between acts.

To illustrate with a practical problem, an English interior of a Manor House has been made for the first act of a play whose second act is staged in India. There is no time and money for staging the second act, but the desired effect may be gained by opening a large window through which the audience can see a background suggesting India. The interest is drawn to this spot by lowering the lights so that the interior of the Manor House is not plainly visible; enough light for the action given, and the play goes on.

Unfortunately, there is a great demand for realism of rather a detailed type, but the important work is to free the little theatre as much as possible and thereby save expense and time by producing simpler and better sets.

A few lessons may be learned from the modern artist who goes into a printing establishment, and there sees a very complicated machine which he is supposed to put into a decoration on a wall. He does not draw all the complicated mechanism from the realistic standpoint, but sets to work to discover which part of the machine is different from every other machine made form. In other words, he trys to find the essential part of that machine, and when he has discovered it, features it strongly in his scheme of decoration so it becomes a symbol. Men who know the machine will understand the symbol, and others will finally learn to do so.

If the modern artist had a studio set to build, he would realize the essentials to be a large north window, cool light on the studio, with working space before an easel. The illusion of this could be given without a window or even an easel. The proper cool light, on a wall, and the shadow on the floor similar to one from an easel would satisfy anyone with ordinary imagination and intelligence.

Sometimes an entire change of period can be achieved by placing a panel or tapestry in a prominent position. To force this effect, it may be necessary to dim the lights on the other part of the set.

In the play called "The Yellow Jacket" will be found the key to the solution of most of the troubles. The first set represents the interior of a Palace. This remains on the stage during the entire performance. When a change of set is called for, the property man who sits at the stage left comes on the stage, changes a few pieces of furniture, and casually announces that the scene is laid in a

different palace. The change is accepted, and the play goes on. Even the mountains over which the hero climbs are but foot stools piled on a table, but the property man said they were mountains, and the audience accepts his viewpoint and is happy that for once imagination has free play.

The stage director who is spending the most money is not necessarily doing the greatest service. Generally he has the detailed type of mind which drives him towards faithful photographic representation which is ineffective and extravagant when used on the stage.

In general, create by the use of draperies, screens, simple forms, arches, different stage levels, and forget as far as possible the paint pot; colored chalk will take light more successfully. It is better to depend for color upon lights. It is the cheapest way.

It is possible to panel stretchers in such a way that the backs can be used for interiors, while the front may be used for landscape sets of the same play.

Probably the greatest mistake made is the wasting of too much light on the ceiling, and the upper parts of the walls. It is unfair to the actors as the eye will tend to find the light. Since the actor is of primary importance on the stage, nothing should be done to distract the attention of the audience from him. Even the smallest quantity of light will become a focal point. For instance, if a person were walking in a dark forest where there was a tiny light a quarter of a mile away, the eye would penetrate the gloom and find it. So light will help to concentrate the interest on any part of the stage or upon the actor. Form and color will also create focal points whenever used skillfully. The principle to be applied is one of contrast, because where it is, there will be an effective force which will attract the eye. This contrast may be either form, color, or light, or a combination of all.

One of the greatest problems in staging is that of creating an illusion of height on a low stage. It can be done by placing a figure, lighted by a baby spot, at the foot of a column which grows darker as it ascends. The upper shapes are in shadow, and thus indistinguishable to the eye. There is not always a figure and column on the stage, but the principle learned can be applied by the study of the column, light, and figure. Place the interest low and in light. Let the light diminish as it ascends. Keep the top of the stage indefinable. The eye will ascend at the rate of the gradation of the shadow, if the gradation from light to dark is fast, the eye will not register to the brain any great height. If slow, it would be possible to represent even 100 feet in height on a 12-foot stage.

A shallow stage gives a cramped feeling. Since depth can be interpreted as height placed horizontally, the two problems become

identical. One way to get depth is to intensify the front edge of the stage, and eliminate its other boundaries. If the stage from front to back is crossed by alternate shadows and lights, the eye in passing from the front to the back of the stage would have to pass over shadow into light, and in so doing, it would register to the mind an impression of a great distance.

If mistakes have been made in creating or arranging a stage set, light may often be used to rectify them. The value of light should never be underestimated as an organizing, unifying, and vitalizing factor.

The future holds great possibilities. Light will come on the stage in one beautiful shower of color, and then by some device be gathered together into shapes which will become symbols. Future development lies in the understanding and use of light.

At this point in the lecture lantern slides were used in order to illustrate the principles previously expressed.

The following questions were asked and answered:

Q. How are screens made for lights?

A. Screens can be made on frames and attached in front of a light. They may be covered with gauze on which gelatine can be fastened.

Q. What material is used to get effects of distance?

A. Gauze or muslin is the best material for this purpose.

Q. What do you suggest as an appropriate background for general use?

A. In most cases a sky. It is wise not to have this represented by one tone of blue. It is better to use pale blue at the base, and gradually darken it toward the top.

Q. Of what use are spot lights?

A. Build your sculpturesque forms by spot light, and use them wherever you need concentration.

Q. Which is the best way to use borders, foots, and overheads?

A. Use them for visibility and color of general character, depending on the spots for accents of color and light.

Q. What material makes the best draperies?

A. From the standpoint of beauty, there is perhaps nothing better than velvet. Good flannelette dyed will act as a substitute.

Q. Which is the best color for a drape?

A. Taupe will take the biggest range of color and light.

Q. How would you paint a backdrop which will take different colored lights?

A. Start with a rather light blue for the base; then spatter with deep red. Cover this with a spatter of canary yellow, and finish with a spatter of neutral gray, and then pray that it will take every kind of light that you will ever need.

Q. What are the colors most influenced by artificial light?

A. Yellow and blue.

Q. What kind of paint is used for painting sets?

A. Colored chalks are better than paint. Kalsomine is better than oil paint.

Q. How do you make stained glass windows?

A. Take a wooden frame, stretch gauze over it, and on this fasten pieces of colored gelatine of varied shapes, similar to the different pieces of glass used in a window. Strips of cardboard painted black will separate the gelatines. These strips represent the leads in the window. Put a spot light at the back and the effect should be complete. Another way is to paint a window on tracing paper stretched on a frame, and lighted from the back.

Q. Can you recommend a good book?

A. *Stage Decorations*—S. Cheney. Published by John Day and Company.

Interpretive Dances

HELEN NORBY
University of Minnesota
Minneapolis, Minnesota

MISS HELEN NORBY, student in the Graphic Composition course in the University of Minnesota, presented a group of Interpretive Dances, preceeding which she said in part, "I intend to illustrate this afternoon the attitude toward expression through music and the human body * * * The type of dancing I am doing this afternoon is quite informal * * * I find a small stage quite adequate."

Miss Norby's presentation consisted of "The Blue Danube" and a Slavonic Dance.

Marionettes, Masks and Shadows

WINIFRED H. MILLS
Fairmount Junior High School
Cleveland, Ohio

A FEW years ago we associated the marionette almost exclusively with the itinerant Italian showman. Now all is changed. A veritable renaissance of interest in marionettes seems to be sweeping over both the United States and Europe. In our country we are greatly indebted to Tony Sarg for this wide spread interest. With his delightful performances of "Rip Van Winkle," "The Rose

and the Ring," and "Treasure Island" he opened the eyes of both adults and children alike to the fascinating art of the marionette. Many artists were quick to follow him into this field of new dramatic possibilities. Wide-awake educators were not slow to recognize these same possibilities. The result has been that in almost every city and town some sort of work with marionettes is being carried on in public, private, and parochial schools from the primary to the high school.

Play-acting, as we all know, is a child's instinctive need for enlarging his world of experience. It develops his imagination and his self-control. The marionette play makes many additional demands upon the child. Not only does it develop his imagination and self-control, if the marionette play is really created, but it develops his ingenuity, dexterity, and self-reliance, sense of personal responsibility to the marionette group, as well as a regard for the rights of others, and an understanding of their work. Whatever play is undertaken should be a challenge to the best efforts of the child. The experience of creating and presenting a simple marionette play with all that it involves of research, designing, composition, color, rhythm, movement, diction, and manipulation of his puppet, may become his introduction to stagecraft and the drama. Music and dance may also be included in the marionette project. The fact that the child, as a puppeteer does not appear before his audience in person, releases him emotionally so that he can, without self-consciousness, fully identify himself with the character which he has chosen for his marionette. It is often surprising how much devotion and sustained effort a child will put into, what he considers, an adequate interpretation of character.

The co-operation of one department of a school with another department brings about a very vital relation as we all know. The marionette can become an ideal means for accomplishing this interrelation. While the marionette project usually begins in the English or Art Department, in time there comes the need for assistance from the wood-work shop for stage building, properties, and various parts of the marionette; from the general metal shop for assistance in lighting; and from the print shop for help in printing programs and tickets. Music may be necessary. In fact almost every department is called upon at one time or another.

Puppeteers in the larger cities have the advantage of working in a vital way with institutions such as the Public Library, Art Museum, Natural History Museum, and Historical Museum, if such there be. (Lantern slides were here shown.)

The new interest in shadow plays corresponds to the interest in marionettes. There is the human shadow play and the cut-out shadow play. The accompanying illustrations may give some idea of the

charm of the dark and light pattern on the shadow screen but they give no hint of the movement, color, music, and the dramatic interpretations of the readers. Shadow plays are suitable for primary, elementary and high schools. Naturally, for the primary grades the shadow play must deal with the very simple stories. There is a wealth of material suitable for shadow plays.

The educational possibilities of masks have rarely been recognized. The creation of a fine mask is truly an artist's problem, since it implies character delineation, together with a high degree of stylization. The making of a mask with all the necessary modeling and painting opens the students' eyes to new appreciations of the human face. The mask demands pantomime and may be used with music and dance. The slides show a Christmas mask given by IXth grade special art class of Fairmount Junior High School, Cleveland, Ohio, at the auditorium in their own school and at The Cleveland Museum of Art.

There should be nothing artificial in the set up of the marionette play, the shadow play, or the mask. Every step should show natural, spontaneous growth. The enthusiasm and joy of the group in its creative effort should increase day by day. When the play is finally given there should be a beautifully sustained and fully realized piece of work, and with it the group satisfaction which will be of a lasting quality and which only comes with the fulfillments of a fine ideal.

Standards in Modern Art Teaching

EVELYN METZER

Head of Applied Art Department
Kansas State Teachers College

DURING the last few years there has been a marked change in the attitude of the general public toward art. For some years it has been considered important in the public schools, but only recently have college faculties felt that it was worthy of time or credit as an educational factor. Art education was considered at one time only for the chosen few and consisted of training leading to creative design in sculpture, painting and architecture. It has now come to include an understanding and appreciation of beautiful things, whatever they may be, costumes, jewelry, furniture, pottery, etc. When we now speak of art education in relation to the general education of the masses we do not mean the training of creative artists. This would be absurd, of course. Artists with real creative genius are born, not made. Lincoln was born great; it wasn't because he split rails, but in spite of it. He, as all truly great or gifted persons, was helplessly predestined. When we speak of art education in con-

nection with the masses, we now mean exposing them to their visual surroundings so that they may become conscious of colors, form, of light and dark, and critical in their judgments. In doing this we are hoping that a few will create; but that many will be able to purchase objects beautiful in form and color and group them so that the result is pleasing and restful. The modern teacher of art believes that it is perfectly possible for an intelligent human being to learn a few fundamental principles which will be a guide in recognizing art quality in various phases of art. He will be able also to appreciate a Japanese print, a frescoe painting, or a Gothic statue. An appreciation of beautiful things is no longer unpopular or immoral. This attitude seems to have been a curious survival of the time when the early Christian fathers were fighting paganism, and as the Greeks and Romans worshipped beauty, beauty had to be swept away.

The modern art teacher finds many situations that tax the ingenuity of her students in promoting beauty. George Cox in the March Teachers College Record voices the idea clearly when he says that, "the *modern art educator* is satisfied, that art in the schools provides an opportunity for individual expression on all planes of experience and for all capacities. He is keen to detect the embryo artist and conduct genuine talents into productive channels, but above all he is anxious to induct all, whether creative or merely imitative into the great and benevolent order of art appreciators." To quote further—"under the guidance of such teachers the art lesson is no longer a joke or a bore. It provides contacts with what educators call life situations and is readily correlated, it motivates many other activities, assists intellectual and economical growth, inculcates desirable abilities and enriches everyday existence. In short, we may say that the best modern art instruction provides the vitamins of education without which much of our educational philosophy lacks real enrichment for the soul."

The average American home is infinitely more comely and more people are interested in trying to make it so. Today everyone is art conscious, aesthetics have invaded business. It is a known fact now that beauty pays. There never was a time in this country when the teacher of art was so in demand. As this interest and desire for the beautiful grows and gains impetus it is the duty of the teacher inadequately trained to study as soon as possible, and older teachers must look to the more progressive methods of teaching art. As interest becomes focused upon beauty a higher standard naturally follows.

The modern standard demands that students should be made familiar with many phases of art. Growth in art appreciation is slow and plenty of time should be allowed. The lessons, however, must really intrigue the intellect of the student, and above all students should know *what they* are doing and *why*.

You are all familiar with the methods of teaching developed by Professors Cizek, Thetter and Rothe. Each holds to opposed theories, but all three have profited by the investigations of psychologists and have a common bond in the sympathetic understanding of youth. When we look upon these creative compositions in color and form we feel that art is as old as the human race, that it is synonymous with the functioning of human life and is of universal concern. We should profit in our teaching by the teaching of others, adapting it of course to our local or specific needs.

Courses for the development of real appreciation should be arranged in a progressive series of synthetic exercises in line, dark and light, and color somewhat as Professor Arthur Dow developed them. This method has stood the test of time and is acknowledged to be a most effective method of teaching people to really know and love beauty. These lessons should be under the direction of well trained teachers as much of their real significance is lost in the hands of the uninitiated.

Modern art teaching demands that everything one does should be done beautifully. A change, therefore, will be wrought in the appearance of many a class room, as a beautiful environment is demanded by modern psychology and pedagogy.

A higher standard demands that money be available for examples of beautiful objects and textiles (not necessarily expensive) to be used in the teaching of art.

For the first time recently we are given some art tests—the McAdory Art Tests, published by Teachers College, devised to measure art appreciation. These tests may be used in a group or with individuals and serve as an effective teaching aid by bringing to a focus the reflective judgment as applied to art values. Each problem of the test comprises four illustrations which differ generally from each other in one art element. The test is therefore a multiple response test which requires an ordered choice of the separate illustrations of each problem according to their relative merit. To many people art has always been so much a matter of opinion and so intangible in analysis that this test is a means of provoking discussion with four varying qualities of excellence which are readily seen. The validity of this test has been most thoroughly proven and on the whole it appears to be a most excellent contribution.

The outlook for the development of art has never been brighter. We have explored science and invention to its depths, the result being more wealth. We are now ready to spend this wealth. We have traveled enough not to be satisfied with the unlovely in architecture, planting, furnishings or clothes. In other words the *desire,* the *demand* for art is here.

The Development of Appreciation in Relation to the Modern Home

JOANNE M. HANSEN
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THE development of appreciation forms one of the most important objectives in education.

Many colleges that emphasize scientific and industrial work are adding as required subjects orientation and appreciation courses in both the fine and applied arts.

There is a vital need for training all students to have a fair degree of appreciation, so that they may be able to select well the things they need for costume and the home, and in order that they may find greater enjoyment in the fine as well as the common things of daily life.

For students of more than average ability, some colleges and art schools are offering sequences in various fine and applied arts so that it may be possible for them not only to develop a high degree of aesthetic appreciation but also to secure some skill in a particular art field in which they may have keen interest.

We must give more attention to the training for leisure hours! We have long emphasized the importance of preparing for a livelihood or a vocation, but have given too little attention to the need of training for an avocation. With the many agencies outside the home appealing to the leisure of the youth of today it takes more than a passing interest to make any one of the fine or applied arts seem vital and worthy of continued attention and enjoyment. The great legacy of the ages in literature, poetry, drama, music, architecture, sculpture, and painting is wealth to comparatively few as compared to the multitude flocking to cheaper amusements. Surely delinquency and crime would be reduced if the home and school of today could meet the need of making leisure hours more profitable.

Home Economics has for a number of years attempted to train all students, the majority of whom eventually become homemakers, in the selection of the things suitable for the home of average means, and has enriched the curriculum so that students are able to major in a field in which lies their chief interest. That Home Economics requires all students to take applied or related art and art appreciation, makes evident the fact that aesthetic enjoyment as well as practical knowledge is considered essential to a well-rounded education. There is still the need of more courses in English and History, since the sciences, essential to foods and nutrition and allied subjects, form a rather large percentage of work required.

The tendency to permit more freedom in the selection of subjects beyond the basic training necessary, is making it possible for students more inclined to the applied arts, including costume design, house planning, interior decoration, textile design, arts and crafts, art appreciation, etc., to take more advanced work in these subjects.

The practical side as well as the aesthetic consideration demand such freedom if students are to prepare themselves for vocations and avocations in which more applied and related art training is essential.

Women purchase 85 per cent of all the things sold in the United States and it is highly important that they should be trained to do this wisely and in relation to their budgets or means. That they may not only be able to discriminate as to what will best fulfill their needs and their budget requirements but also as to the qualities that make for beauty, is essential if things are to give both service and lasting satisfaction.

From a kitchen utensil to a rug or piece of furniture, there are certain underlying elements and principles that make for beauty. These are gradually developed and frequent opportunities for judgment of both poor and fine things are given the student in order that a finer sense of discrimination may be developed.

To develop aesthetic judgment is difficult, since it includes so much! It requires alert attention and sufficient knowledge, training and experience to determine not only the common but the subtle and fine qualities that make for appropriate use and beauty. It deals with criticism which has to do with the analysis and effect of the art elements of line, form and mass, notan or light and dark, texture and color. It has to do with the application of art principles, proportion, rhythm, balance, subordination or emphases, harmony and unity. It necessitates a feeling for color combinations and a feeling for knowledge of composition. It is not only the ability to criticize, nor the power to create a masterpiece, but it is the reaction of an alert individual who through training supplements his natural taste to a high degree of sensitive reaction through eye, brain, nerve and muscle powers, so that he finds enjoyment and delight in even as common a thing as a well designed chair leg.

Is it possible to expect all college students to develop high standards of aesthetic judgment? Probably not! The best we can accomplish in the few hours devoted to applied art and the work given related subjects, is to secure from fair to good judgment concerning the ordinary objects of the home environment. For the student naturally alert in sensuous perception, which is one of the most important attributes to appreciation, one may expect with a basic training in at least one of the arts, to develop more subtle aesthetic judgment.

Artists and art trained individuals generally maintain that a

thorough study of one art is absolutely necessary to secure fine aesthetic discrimination. Individuals without such training but with innate good taste may be competent to judge many things but they are usually unaware of subtle or complex qualities that are very evident to the art trained individual.

The following are some of the means we have used in the applied art department of Iowa State College to improve or enlarge appreciations:

By establishing standards of beauty approved by critics and experts in the particular field of art in question.

By developing through first hand observation and through discussion the elements and principles that underlie art.

By finding examples of fine things in the environment and determining the qualities that make for beauty.

By testing the common things about us according to these standards.

By emphasizing the study of nature first hand, since keen perception seems necessary to enjoyment, but being careful not to confound nature which is God's handiwork, with design which is man's way of expressing his ideas in materials made suitable for use.

Observing the order and beauty in the sciences such as Botany, Zoology and Bacterology, which have more in common with art than is generally conceded.

Training for the enjoyment of leisure by having a hobby or an avocation, thus increasing appreciations, and perhaps adding to one's income.

Visits to exhibits and museums. Students come in contact with fine things and feel their reactions firsthand both with and without a critic or trained individual to guide them.

Observation, discussion and comparison of actual things with the aim to determine the general characteristics and salient points that make for beauty or a lack of it.

Judgment tests determining rapidly which of two similar things is better. Later adding more things from which to select as five or six and grading them all in order from best to poorest.

Educational tests as worked out by experts.

Laboratory problems dealing with art elements in original design and composition.

Working with and combining actual materials in the laboratory in relation to use such as furniture and accessories in the home.

The planning and furnishing of a home on a budget not to exceed $6,000.00 for lot, house, and furnishings. The budget would depend upon, location and standard of living.

Much more depends upon this material side of making home life more nearly ideal than is generally conceded.

The term efficient has been overdone but the plan of a home must be workable, must save energy, so as to make the work as light as possible, and to provide leisure hours for the finer things of life.

The movement in modern art that emphasizes the need of adequate equipment and greater simplicity in home furnishing is of vital importance. It need not however mean a revolution in our surrounding but rather the elimination of the many nick-nacks and mediocre things that keep one from seeing the very few fine things, and thus cheapen the effect. Multiplicity of things such as used in the Victorian period is fortunately taboo in the home of excellent taste. The custom of the Japanese, of having a storeroom in which are kept the fine things, and the bringing out for use the few things desired for a certain effect could well be emulated in our homes.

We are fortunate in having at Iowa State College a large interior house design laboratory about 40 x 40 feet which may be made by means of large screens into as many rooms as the average house of Iowa would be apt to have. Here students arrange the simple cottage furniture and early American furniture as they desire, selecting the accessories, such textiles, pottery, pictures, table covers, slip covers, et cetera, as they need and arranging them according to both use and beauty.

Each year for a number of years the students of the interior house design classes in co-operation with the structural house equipment department and the merchants of Ames have furnished the Better Homes House under the applied staff instructors of interior design and the City Chairman, which office I have happened to hold. This project is undoubtedly the best one we attempt since it gives the students practical experience in a field in which they are intensely interested. They organize their class committees, and co-operate in a splendid way with other agencies and clubs in the city. The high school girls, the Boy Scouts, musicians, librarians, landscape architects, the Mayor and City Council and Womens Clubs all lend their aid to make this week reach one of the high periods of community life.

There were over 7,000 visitors to the house last year in a town that has about 10,000 inhabitants, and I wish you might have seen the graciousness with which the applied art students and the women of Ames welcomed them. There are other things besides the successful equipment, furnishings and landscaping of a home that such a project offers, among them the fine spirit of helpfulness, the high ideals maintained and the urge that sweeps over the city to make the home not only more beautiful, but a place where one may feed one's soul and mind as well as one's body.

How the paint brushes flew, as kitchens, woodwork and walls were made more lovely as backgrounds, and how the dyes transformed faded draperies into lovely colors! How mother's work

became easier because father became interested in a new piece of kitchen equipment and how a fire-place was added in order to make a heart for the home and a hearth for the family to gather around; how books almost neglected, found again interested readers; how big brothers made some play apparatus in order to keep the younger ones at home in their own back yards; and how the neglected boy's room became a meeting place for his friends, because of its added attractions and home-made radio and cabinet for his Boy Scout activities—all these things and many more actually happened as a result. The finest thing was the added appreciation of what a real home should be. The Better Homes house was filled with mothers, fathers, sons, daughters and the laughter of little ones, and everywhere abounded comfort, beauty, and simplicity. A globe fascinated everyone, and books of travel and adventure, the strains of good music, the home-makers' hour over the radio, all these things made one feel that here was the making of a real home. I wish you might have seen the college girls with some of the fine young men of whom Iowa is so proud, go through the house commenting upon this and that, and asking questions.

Besides furnishing the Better Homes house the first week of April during the National Better Homes Week, other projects such as plans for remodelling and redecorating the Y. W. C. A., or preparing sketches and selecting material for some new home in the neighborhood form valuable projects for classes in interior house design.

There is an increasing demand for young women in applied art fields who have the home economics viewpoint. Art schools also realize the importance of having students carry out actual commercial problems and are co-operating with business firms in order to gain the necessary experience.

Students are taking positions as extension specialists, home demonstration agents, commercial designers, teachers, interior decorators, and demonstrators for commercial firms. All these positions require for success aesthetic appreciation. Only as students are trained well to undertake such responsibilities may home economics training be considered adequate. Later the majority of young women become homemakers and as such we may expect the fruitation of their training in the application made to the American home.

Vocational Training for Girls in Minnesota

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THE term "vocational education" is one that is used very commonly nowadays, but undoubtedly, if each of us were to express just what is meant by the term, a great many different ideas would be represented. It seems advisable, therefore, to define the term, so that we may stand on common ground, at least during this discussion.

In the minds of most educators interested in all day trade schools, vocational education means that type of trade training which results in successful placement in the trade for which the student has been trained. The measure of success which any trade school enjoys is not determined by the amount of general education or the number of definite skills of which its graduates may be possessed, but rather by the ability of its graduates to hold successfully the positions in which they are placed by the school upon the completion of their school training.

Failure of the trained student to hold his position successfully is not alone the personal affair of that student. It is, rather, a warning to the school to take account of itself as to the type of vocational training it is offering.

My subject this afternoon reads "Vocational Education for Girls in Minnesota." Home economics courses are offered for girls in practically all high schools in the state, but the work is not presented from a vocational point of view. In Virginia, a progressive northern Minnesota town, some sucecssful work has been carried on in photography. Whether this work is directly vocational, according to our interpretation of the term, I do not know. It is true, however, that many of the high schools of the state are offering vocational courses in the so-called business subjects including typewriting, bookkeeping, and stenography. The graduates from these schools are being placed in the trade and to a greater or lesser degree a careful follow-up of their successes and failures is being kept.

With the exception of these courses preparing for general office work, I know of no vocational training for girls being given in the State of Minnesota except that offered at the Girls' Vocational High School of Minneapolis. Since, after careful investigation, this appears to be the case, perhaps you will pardon me if my statement concerning vocational training for Minnesota girls shows a brief summary of the work of this particular school.

In considering the work of the Girls' Vocational High School of Minneapolis there are several topics to be discussed briefly. They are as follows:

1. Methods of choosing students for vocational training
2. Selection of courses
 (a) Through counseling and
 (b) Through testing
3. Methods within the school for making adjustments for unsuccessful students
4. Statement of courses offered and their general organization with a detailed statement of one typical organization
5. Placement of students
6. Stability of placement
7. Aims of the Girls' Vocational High School.

In discussing the first subject, methods of choosing students for vocational training, the question may be asked, who, in general, should attend a vocational high school. Statistics from the attendance department of the public schools of Minneapolis show that each year a vast number of boys and girls are reaching the age of sixteen, where compulsory education ceases, and are leaving the schools to enter industry. Mr. Webster, former superintendent of Minneapolis Public Schools, shows in his annual report for the year 1928-'29 that 15,002 boys and girls withdrew from the public schools and 3,847 from the private and parochial schools, making a total of 18,849.

Of this number 3,420 were high school graduates. Other reasons for withdrawal were "left city," "permits," "illness," "not located," "O. C. A.," etc. Four thousand forty-seven boys and girls left the schools of Minneapolis in 1929 who were O. C. A., or over compulsory age. This number must have been largely from the eighth grade and above, or the children would not have been over sixteen. The records from most of the schools would show that the members of this O. C. A. group are marked on their withdrawal cards as "looking for work." The question that arises in our minds is this—Were these young people prepared to "look for work?" Should they have been vocationally trained? Could they have been vocationally trained?

An average girl completes the eighth grade when she is fourteen. An average girl may complete her training in any one of the trade courses at the Girls' Vocational High School in about two years. If she were to be vocationally trained between the ages of 14 and 16, when the compulsory education law releases her, she could be definitely prepared to enter industry successfully.

This is not possible in any of our four year high schools, where the courses are in the main college preparatory. If it is possible for a girl to get the type of vocational education she needs after com-

pleting her four year high school course, all is well. However, if her trade training must be short, the question arises as to the advisability of her attending a vocational school. Certainly the over compulsory age group would profit greatly by being prepared with a definite vocation when each goes out looking for work. The Girls' Vocational High School meets the needs of those who wish trade training, and that in the shortest time possible.

After it has been definitely determined that a girl wishes vocational training because of economic need or because of special fitness for that type of work the selection of a course becomes necessary. Minneapolis is extremely fortunate in having a well organized department of placement and guidance. Pupils in the grades are being carefully studied by vocational counselors whose entire time is given to that type of work. Less and less are hasty decisions being reached by teachers unacquainted with the Vocational School. Because a girl has a low intelligence quotient, because she is a moral degenerate, because she is physically handicapped, it does not necessarily follow that she should take a course at the Vocational High School—no particular course, but just vocational training. The counselors are making tremendous strides in doing away with this type of thing.

Tests are given in the grade schools and junior highs, courses of study for senior high school and for Vocational High School are studied, visits are made to schools before choices are made, economic conditions are taken carefully into consideration by counselors. Reports from the vocational School are sent back to the counselors each semester as to the success of students recommended for certain courses and reasons given for failure to succeed. These reports aid counselors in noting their mistakes so that they may guide more effectively from time to time. Every attempt is made to direct girls into the trades best suited to their abilities.

We have a very definite testing program within the school which aids in some small degree in predicting success in certain trades. After several years of testing, with a special study made of intelligence quotients of graduates, a minimum standard has been set for stenographers below which success in the trade seems highly improbable. The retail training department has worked out a very careful program of testing. A study is being made as to the relation between salary increases of the graduates and their intelligence quotients. In this department the intelligence quotients have been verified by a series of tests. With a record of several years testing results show that girls with intelligence quotients of 99 to 118 have very good chances of promotion, those from 90 to 98 show a considerable lower average wage with some conspicuous cases of success, those between 80 and 89 show a decided drop in the average wage, although they are able to hold jobs which are mainly non-selling. The

question arises in this department as to the advisability of training girls below certain levels. Do girls below 90, perhaps, profit by the training?

In the dressmaking department it would seem, from data obtained so far, that there is no relation between the intelligence quotient and increase in wages on the job. In the class of 1928 the girl getting the highest wage had the lowest intelligence quotient, while the girl with the highest intelligence quotient was receiving a minimum wage. This of course is merely a happenstance, but it shows an apparent tendency, nevertheless. The average intelligence quotient of those in the dressmaking trade in the class of 1927 was 92, in the class of 1928, 91. The average intelligence quotient of those who left the dressmaking work in the 1927 class was 93 and in the 1928 class 98. The average intelligence quotients of those who went back to school for more advanced training along other lines in the 1927 class was 100, in the 1928 class 99. It would almost seem as though those with higher intelligence are leaving the trade for advanced training along other lines. The department is making a thorough study of these facts and attempting to draw conclusions.

Even though every attempt has been made by counseling and testing to place girls in the right trade mistakes are made. This is taken care of by a very flexible organization. The subject matter of each course, technical, cultural, and related, is definitely arranged in units of ten weeks' each. Eight units of work make up the entire course. At the end of each ten weeks' period it is possible to make adjustments from one course to another. These adjustments usually prove to be very effective, for when they are made after a student has been in the school for a time we are well acquainted with the student who is being transferred. I think of one girl who enrolled in the general office course. She manifested very little interest in her work, was absent and tardy perpetually, had nothing but failure on her report card. The visiting teacher went to her home and reported conditions were very bad, a drunken father and very little income made it almost impossible for her to be in school. At the end of the term she asked for a transfer from the general office work to the junior nursing course. She began to show interest immediately and her whole attitude towards her work changed. She was in school every day, never tardy, and at the time of the first report card she was an honor student. Her first interest in junior nursing has been sustained all through the course. The impossible home conditions did not keep her from coming to school. What we had thought would be an impossible situation has at least not prevented her from making one of the most successful nurses that the school has ever turned out.

By having the two year course divided into eight units it is possible to push the faster pupil up into the higher group and to retard

the slower pupil. Pupils of like ability can work together. Passing by subjects is a thing of the past. A department conference determines whether a girl has completed a unit of work, whether she should be retarded, or whether she should be given a double promotion. Frequently girls are unsuccessful in their trades because of bad teeth, tonsils, eyes, malnutrition, lack of carfare, which would prevent regular attendance, emotional disturbances of all kinds. Through the attendance department, the Child Guidance Clinic, school nurse, scholarship committee, Big Sister organization, and many other ways these needs of all kinds are cared for. A special milk fund is maintained by the school to increase in weight the undernourished children. Every attempt is made to make conditions such that each child has a fighting chance in the trade she has chosen.

The Girls' Vocational High School offers training in fifteen different trades. They may be listed as follows:

Industrial Arts
Commercial Cooking
Junior Nursing
Bookkeeping
Comptometry
Multigraphing
Stenography
Typewriting
Telegraphy
Printing
Retail Training
Power Machine
Dressmaking
Millinery
Decorative Arts

In order that I may make clear the organization of the courses of study I will describe in detail the general plan in one particular course of study; namely, dressmaking. What is true of this trade as to general plan of procedure is likewise true of all the trades in the school. In every course half of the day is given to trade work and half to related and cultural training. In the dressmaking department half a day is spent in the shop and during the remainder of the day time is given to related work, such as design and shop knowledge, and to cultural subjects, such as history, civics, or English. Each shop is run on a productive basis. What is meant by this can be well illustrated by the dressmaking shops. During the first unit of work the girls are in the power machine room, which in every way is run as much like a factory as possible. In order that speed may be obtained, the out-put from the department must be large and must be of commercial excellence. Practically all of the work of the department is by special order. Before Christmas this year an order of 150 dozen organdy aprons and several dozen simple house frocks and pajamas were turned out for the Dayton Company. All of the shirts and uniforms worn by the janitors and matrons of the Minneapolis Public Schools are made in the power machine department. Special uniforms are worn by junior nurses, printers, telegraphers, cooks, and dressmakers. These are all made in the power machine room.

After the dressmakers finish their first unit of work they go into the shop where hand sewing is done on children's clothes. As they proceed in their course they work on dresses and coats for adults. All garments are made to fill special orders of customers.

In the related work for the dressmakers a considerable amount of time is spent on shop knowledge, a study of textiles and simple measurements necessary for successful dressmaking. In the design work much attention is given to the study of color and line, both of which are of such great importance in the creation of an attractive gown.

Likewise, all of the other shops in the school are carried on as nearly as possible like commercial shops. The industrial art department receives more orders for jewelry and other metal work than it can possibly have time to fill. The junior nurses have much of their trade work in private nurseries and neighborhood houses. During the last term of their training they have their practice work in the Vocational Hospital, a hospital incorporated and operated by the practical nurses' association. The cooking group run the cafeteria, also maintain a commercial tearoom where twenty to forty are served every day. The print shop does all of the printing for the Board of Education, such as tests, report cards, pass slips, diplomas, commencement programs, and forms of all kinds used in the city system. In the bookbindery, text-books are rebound for the Board of Education. The retail training department have very definite arrangements with some of the large Minneapolis stores by which girls assist at various times with special sales. During the two years the girls are in training in school they will have had a considerable store experience. The stores, in turn, become acquainted with the girls so that they know whom they wish to employ permanently as the girls complete their school training. During the last two units of the business course there are a good many chances for temporary work. Practically every graduate from the business department will have had a considerable amount of actual experience on the job before being permanently placed.

The entire school is run on this plan. The training must approximate actual business conditions as nearly as possible. No student is permitted to graduate from the Girls' Vocational High School until she has had at least a minimum of three months experience in a job that promises to be permanent. Girls must be in the trade at the time of graduation and must have been there at least three months before becoming eligible for diplomas. This is in accordance with our definition of vocational education; namely, not only trade training, but trade training that leads to successful employment.

Placement occupies so important a place in vocational education that it must be done by especially trained workers. Three co-ordina-

tors spend about a half day each in taking care of student placement, both temporary and permanent. When a pupil finishes her seventh unit of work, if she has the recommendation of her department, both as to scholarship and general recommendability, she is promoted to the eighth unit, which automatically places her in the group eligible for permanent placement.

Last year a report of the graduates of the Vocational High School for the past five years, the years 1924 to 1928, was compiled by the various co-ordinators. By use of questionnaires, telephone calls, and visits, the following percentages of graduates in the trades were heard from.

Group I—Dressmakers, milliners, cooks, junior nurses 75%
Group II—Business, telegraphy, printing 85%
54%
74%

respectively

Group III—Department store employees..... 97%

The most complete check-up came from the retail training department, probably because of the compactness of the placement and the close co-operation existing between school and stores. Of the number heard from of this group, 73% are still in the trade. Of the business and office workers, 85% were heard from and 86% of this number are in the trade. 54% of the telegraphers were heard from. This number was the smallest, probably because their work takes them out of town where a check-up is difficult. Of this number 80% were still in the trade. Of the needleworkers 75% were heard from, with about 59.8% still in the trade.

Of those heard from who are not in the trades some are in other trades, some in school, a few married and at home. There is very little unemployment. Of the dressmakers .8% were unemployed; milliners, 1.4%; nurses, 5.8%; cooks, 5.5%; store employees, 3.1%; office workers, .9%. Telegraphers and printers were all employed.

These figures certainly show a considerable amount of stability of employment for graduates. In these days of unemployment it would seem that these figures are very significant. Again I ask the question as to what is becoming of the 4,047 who are leaving the high schools without trade training? A follow-up record is being made by the department of placement and guidance of this group. It will be interesting to compare, in so far as it is possible, the relative success in industry of the two year group of Vocational High School; namely, those who have completed their trade training, with the group comprised of those who were not specifically trained.

Of the withdrawals each term from the Girls' Vocational High School about 33% are candidates for diploma or for certificate. These are definite placements in the trade. Our job is far from 100%

perfect. However, the number of withdrawals from the school is constantly decreasing. We are working everlastingly, through counseling before and after coming to the Vocational School, through shifting from one course to another, through better organization of courses, through interesting extra-curricular activities, to cement together more closely the student body. A better building, better equipment, greater diversity in courses, more room for expansion, will make it possible to serve a greater number effectively. Our slogan is, "A definite trade training or definite plans for further education for every girl who leaves the Minneapolis High Schools."

The Dunwoody Industrial Institute

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This article will attempt to set forth rather briefly answers to the following questions:

What is it?
Who attends?
What policies have been developed?
What curriculum has been worked out?
What organization is used?
What is the general operation?

Dunwoody Institute was founded in 1914 with a private endowment of from five to six million dollars and it has an annual enrollment of about 1,500 students in the Day School with 2,500 in the Evening School.

The maximum daily attendance in Day School occurs during the midwinter months and totals about 900 students. The maximum Evening School enrollment occurs at about the same time and totals about 450.

Thirty-eight per cent of the Day School student body lives in the Twin Cities, 47 per cent lives in the State of Minnesota outside of the Twin Cities; and 14 per cent comes from outside of the State of Minnesota. Students from outside of the state come from widely divergent points—from Maine to California and from Canada to Florida, with a few from other countries like Canada and even more remote countries.

In the Day School, two general courses are offered: the regular course from one to two years in length averages about 50 per cent class work and 50 per cent shop work and is largely attended by boys from sixteen to twenty years of age; the other type of course is an all day shop course offered to applicants over eighteen years of age who devote nearly, if not all, of their time to shop work. This

latter groups is made up largely of older boys, young men and older men who come to Dunwoody for special training in lines in which they are already experienced.

For example, a garage mechanic desires special training in automobile electric work and finds it convenient to attend Dunwoody during the mid-winter months when work is dull in the automobile trade; or a contractor or carpenter wishes to take up special work in building design, taking off lists of material, etc., and he follows the same procedure in the Building Construction Department.

To meet this special demand, Dunwoody has developed policies which enable it to admit any students who wish to report any day of the year they wish to report; and we may almost state, for any length of course from one week to two years. In fact, we often admit students with a request like the following: "I have worked in a garage about three years and I want to put in a week on training in burning-in stands"; or a request like the following: "I have been working in a printing establishment for five years and want to attend two weeks in Day and Evening School to get some special color work on the Cylinder press." These cases are easily taken care of by the system established at Dunwoody.

The Dunwoody instructional staff is made up of two groups. One group consists of men employed on a yearly contract basis who are subject to duty ten, nine or eight months a year when and as needed. The other group may be listed as a "call staff," and this group consists of many expert workmen in Minneapolis or throughout the state who are available during certain dull periods during the year and report to Dunwoody when and as needed. This latter group gives us the necessary flexibility or "slack in the rope" to take care of the variable student load which reports for training.

Some of the policies set up at Dunwoody may be briefly outlined as follows:

(1) A general policy to admit anyone, anytime, for any course and any length of course. Obviously, this is a goal for which we strive and toward which we are making considerable progress.

(2) The basic idea that the shop instruction is the nucleus or central part of our training and that our instruction should be built up around the shop somewhat in the nature of concentric circles. For example, a student is scheduled to do certain work in shop; around this shop experience there is certain related material like mathematics, drawing, English, science, and other related lines. The development and teaching of this material is therefore built around the shop as a center.

(3) The attempt to constantly keep our eye on two main objects:

(a) To train young men for a more successful entrance to a certain trade or industry.

(b) To train older and experienced boys and men for promotion or permanency of employment in their respective lines.

The curriculum of the school may be briefly outlined as follows:

Students in the regular one or two year courses are scheduled for approximately half time in class and half time in shop work. (Considerable variation is arranged for in this matter; for example, electrical students are scheduled for more class work as we believe that electrical training is more of a mental activity. On the other hand, automobile students are scheduled for more time in shop as we believe that automobile work is more of a manipulative trade.) As stated above, half of each day is devoted to class work, and this class work is roughly divided into half of what may be called General Subjects and half in what may be called Applied Subjects. The General Subjects include review in arithmetic, trade English, some gymnasium and some library work. The Applied Subjects material includes such work as trade information, the study of trade journals and trade catalogs, and similar instruction.

Provisions are made so that students may individually progress in class work.

In scheduling the shop and class work, students are segregated into shop sections and in applied class instruction by trade; while mixed groups are scheduled for subjects like gymnasium, library and review arithmetic.

The entire schedule is arranged so as to permit great flexibility. For example, an advanced shop student may be scheduled for an elementary class section; and he will be given a chance to be promoted or to progress individually in the class work.

All younger students entering Dunwoody spend the first few months in a General Shops Department. This department has various objectives such as giving a limited amount of auxiliary shop training; for example the automobile student must know some of the simpler processes in connection with machine shop practice and blacksmithing; the electrical students must know some of the simpler processes in machine bench work. The General Shop also serves as a vocational advisement department to help the boys find themselves, as some students entering are not quite sure which trade best meets their aptitudes, attitudes and abilities. Then, too, this department serves as a reservoir to help take on the new, younger students who report from Minneapolis and points throughout the state at various times throughout the year.

The training at Dunwoody involves considerable actual production. For example, students in the Automobile Department, after they have acquired a certain trade knowledge and manipulative skill on cars, engines and equipment belonging to Dunwoody, are

scheduled to do actual repair and overhauling work in the garage where cars for outside customers are overhauled and repaired.

In carrying on shop training, special effort is made to as nearly as possible parallel trade conditions. For example, students are required to use time clocks and the jobs are assigned from job sheets, blue prints, and job tickets. The shop instructors make every effort to train the students in methods and procedures as met with in the trade.

Considerable progress has been made in developing co-operative training plans by tieing up with employers, some of whom take fixed numbers of students each year. Our courses make an effort to train students specifically to meet these companies' requirements.

In other cases, large concerns furnish instructors and special courses are given at Dunwoody to prepare selected, advanced students to meet employment requirements of these special concrns.

Tie-ups have also been formed with national associations which results in the school's receiving favorable consideration in connection with publicity, placement of students, and the securing of equipment and instructional material.

Co-operative training plans have been worked out with the Board of Education whereby boys taking their first year's work in certain trades at the Boys Vocational School take their second year's work at Dunwoody.

We have another co-operative plan with the College of Education, University of Minnesota, whereby under certain conditions, students in the College of Education may take shop courses for college credit at Dunwoody.

The above gives in a somewhat general way some of the things that we are trying to do and some of the ways that we are trying to do them in at Dunwoody.



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The Minnesota Mechanical Ability Tests

PROFESSOR DONALD G. PATERSON
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Minneapolis, Minnesota

THE Minnesota Mechanical Ability Tests[1] were produced as a result of a four year research investigation conducted by the Department of Psychology at the University of Minnesota. The study was financed by a grant from the Committee of the National Research Council on Human Migrations. Whatever values emerge will in large part be due to the unusually effective co-operation rendered by the Minneapolis Public Schools.[2]

The first year of the study was devoted to the trial of some twenty-six tests, each selected as a possible measure of mechanical ability. An effort was made to include as many "paper and pencil" tests as possible so that the economies presented by group tests might be explored. The net results of this preliminary experiment may be summarized as follows:

1. The Intelligence Quotient is only slightly related to success in vocational shop courses or to performance in these varied motor ability and mechanical ability tests. This conclusion is of the utmost importance for a thorough-going program of differentiated education coupled with educational guidance because it means that many pupils lacking academic aptitude do possess more than average ability in things mechanical and, hence may profit more from mechanical shop courses than from strictly academic instruction.

2. Only six tests survived the preliminary experiment by showing a significant relationship to success in Junior High School shop courses. These were: The Stenquist Assembly Test (a test requiring the putting together of ten disassembled mechanical contrivances such as a lock, coin purse, etc.), Link's Spatial Relations Test (a formboard consisting of nineteen cut-outs varying in size and shape), a Paper Formboard (a paper and pencil test requiring the analysis of thirty-two dimensional geometrical shapes into parts), a Packing

1. A complete account of these tests and results has been published by the University of Minnesota Press, 1930. Arrangements have been made to market the tests through the Marietta Apparatus Company, Marietta, Ohio.

2. In any co-operative undertaking it is impossible to acknowledge adequately the contribution of each person to the successful outcome of the work. The Mechanical Ability Research Staff (directed by D. G. Paterson and R. M. Elliott with the assistance of L. D. Anderson, Chief Investigator; H. A. Toops, Statistical Consultant; G. Ulvin, Research Assistant; E. Heidbreder, in charge of publications, and others) is greatly indebted to the untiring co-operation of J. N. Greer, Principal of West High School, and J. E. Painter in Charge of Vocational Education work in Minneapolis Public Schools, A. F. Benson, Principal of the Jordan Junior High School where the main experiments were conducted, the shop teachers in the Jordan Junior High School (Mr. G. M. Caviness, Mr. L. A. Runnells, Mr. H. R. Hurd, Mr. V. W. Carlson, Mr. L. C. Heironomus, and Mr. W. C. Farnquist), and other shop teachers in the Minneapolis Public Schools, especially C. A. Zuppann of Roosevelt High School who aided in committee work and also constructed two measuring machines for making measurements of shop products.

Blocks Test (packing 147 one-inch cubes into a box as rapidly as possible), a Card Sorting Test (sorting a pack of red and blue cards into two piles according to color), and a Steadiness Test (a metal plate containing nine holes of varying diameters. Subject holds a metal stylus in each hole in turn for fifteen seconds without touching the edge).

3. The surviving tests were shown to be too unreliable for guidance purposes. This required an extension of the research to improve these tests to the point of practical usefulness.

The second year was devoted to a second trial of the surviving tests. Each was modified chiefly by lengthening so that each would yield a highly reliable score for any subject. These were then given to a new group of Junior High School boys and again the test scores were checked against success in the shop courses. Success in making each project in the shop courses was measured very objectively by using especially constructed measuring machines and rating scales as well as ordinary rulers and calipers. On the average, 2,000 ratings and measurements were made on the work of each boy. In addition, objective information tests were constructed for each shop course so that each boy's progress in acquiring information concerning the use of tools and materials could be measured.

Three of the above tests proved not only to be highly reliable but also to be fairly accurate in measuring a boy's aptitude in the shop courses. These are: The Minnesota Assembly Test (a modification of the Stenquist Assembly Test), the Minnesota Spatial Relations Tests (a modification of Link's Spatial Relations Test), and the Paper Formboard Test. Each predicts shop success as closely as I. Q. predicts academic success. Furthermore, these tests are only slightly related to I. Q.

In addition to the above tests, each of these Junior High School boys was given a series of gymnastic tests such as strength of grip, running ability, height and weight, broad jump, and lung capacity. These tests were combined to give an "agility index" for each boy. Analysis of these results shows that shop success is not dependent upon agility nor is success in the three best mechanical ability tests related to agility.

At all stages of the investigation it was common to hear surprise manifested at the striking range of individual differences found among these seventh grade boys. These differences, whether in test performance or in shop ability, were impressive. In the Minnesota Spatial Relations Test, Board A, the shortest time required by any boy was three minutes and thirty seconds as contrasted with the longest time—twelve minutes and fifty-five seconds. The differences in shop skill are no less impressive. In the wiring project, for example, some of these boys, with only a short period of training, turn out a

splice which would do credit to an expert wireman whereas others are scarcely able to join the wires securely enough to hang together.

In the face of these differences it was thought worthwhile to discover, if possible, what environmental influences might have been effective in producing these individual differences in mechanical ability. A trained social worker visited the home of each boy and tabulated such things as mechanical performances of the boy and his father around the home, tools owned by the boy and by his father, etc.

The results are rather surprising. There is no relation between a boy's mechanical ability and the number of tools he possesses, the number of tools his father owns, or the amount of handy work and tinkering his father does. Even those boys whose fathers are engaged in occupations involving mechanical work are no more likely to be mechanically inclined than are those whose fathers are not following mechanical pursuits. The upshot of this phase of the study would seem to place the burden of proof upon those who reject the theory that these individual differences are mainly innate.

One of the most surprising discoveries in this study deals with sex differences in mechanical ability. Seventh grade girls actually excel seventh grade boys in several of these mechanical ability tests. In the face of unequal social pressure exerted upon the sexes in things mechanical, this superiority of the girls is most striking. The only test in which boys clearly excel is the Minnesota Assembly Test, such superiority undoubtedly being based upon greater opportunities for practice in manipulating mechanical contrivances. In the absence of such specific practice effects, it turns out that boys are not definitely superior to girls in mechanical ability. These findings perhaps explain in part the readiness and success with which women replaced men in "mechanical jobs" during the World War.

Comparisons between vocational school boys and academic high school boys comparable in age reveal no significant differences. This suggests that the selection of students for vocational schools is based on something other than mechanical ability. There are reasons for believing that selection for vocational schools is frequently a negative process wherein some "academic failures" shift to vocational work merely to "escape" from distasteful academic work.

IMPLICATIONS FOR VOCATIONAL EDUCATION AND GUIDANCE

1. The uniqueness of mechanical ability with respect to abstract intelligence and motor-agility and strength cannot be overemphasized. The possibility of salvaging individuals with low I. Q.'s possessing mechanical ability is so obviously worth following up as to require no further defense.

2. Techniques used in evaluating success in shop work indicate the possibility of improving methods of measuring achievement in

shop work. It is hoped that shop teachers, trained in the techniques of educational measurement, will carry the work forward to the end that reliable achievement measuring devices in shop subjects may become as widely available as are achievement measuring devices in arithmetic, spelling, geography, history, etc. These devices may also be used to motivate boys to strive for a higher degree of skill in manipulating tools and materials. Similar motivation has resulted from the introduction of definite standards based upon measurement in academic subjects.

It is hoped that this investigation may play a small role in the tremendous task of conserving and making effective use of human talents in our industrial society.

Fundamental Requirements for Industrial Arts Projects

S. L. COOVER

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ONE of the aims of Industrial Arts is to give the student an opportunity for creative thought and expression through his own experiences. Which experiences contribute most to this end? We may well ask ourselves: what are the attitudes resulting from the experiences the boy has in our shop?

Does the project he has just finished leave a residue of skill and satisfaction, and a desire to keep on working in the shop? Or does it leave him "cold?" Just another task completed; only another counter toward graduation. The importance of selecting the right project for boys to make cannot be overestimated. For this reason we have made a special study of shop projects and noted the essential elements of the best ones. The first requirement of a good project is that it must be interesting.

I. INTEREST. I am sure we are all agreed that the instant any worthwhile interest is aroused in any pupil that instant his upward path begins. Interest is a fundamental requirement for any learning situation. Interest is the foundation of purposeful activity. Because of purposeful activity muscular activity is more accurate and success is more liable to be attained.

In brief what we get from purposeful activity (represented in this case by an interesting project) is more efficient effort, resulting in success and right attitudes towards work, school and life.

The result of non-purposeful activity (uninteresting projects) is just the opposite. Inefficient effort resulting in failure. There is no

remembering of desirable things, no skill acquired unless interest is the chief motive power.

II. CREATIVENESS. Does our industrial arts "set up" foster the spirit of amateur invention? In the end our entire industrial arts program will succeed to the extent that it nourishes and strengthens the boy's normal impulse to make things. The attainment of every aim or objective of industrial arts that we have yet set up depends primarily upon this disposition or pre-disposition on the part of the boy to build and to create. A boy gets a lot of satisfaction out of making something with his own hands. This satisfaction which comes as the result of making something is the chief motive power of human progress and with satisfaction comes pride in workmanship and the third of the triumverate is success.

The contribution of a project to creative thinking may be two-fold. Its value depends first upon the facts concerning tools, machines, skills, and raw materials which its builder acquires and secondly upon the possibility of individual treatment in matters of design and decoration which it permits.

We should seek to give the student an opportunity for creative thought and expression through his own experiences. There are people with whom creative work is indispensible to their very lives.

A GOOD PROJECT IS ONE THAT INHERENTLY REQUIRES SKILL

III. SKILL. The best project is one that challenges the boy's ability both in thought and in tool processes. In other words it requires skill. Looking in the dictionary we find that skill is knowledge of an art or science combined with mastery of its technique. I have found that educators usually agree on the knowledge part of the definition since that is vague enough to sound all right to them. But to mention mastery of technique usually means a debate between the ultras of both camps. Since absolute mastery of a technique is seldom if ever attained, we shall speak of the degree of mastery of the technique or more simply the degree of skill.

It is evident today that there are many degrees of skill. Most of us are also aware of the fact that industrial arts calls for a different degree of skill than trade training. Whether we are willing to admit it or not, a rather high degree of skill with tools is one of the real virtues which we strive to have our boys attain. In University classes and in meetings like this one we may rationalize to some extent and say that skill is of lesser importance. Nevertheless when exhibition day comes the product of the most skilled only is exhibited.

The test of success in life is the ability to do useful things.

A rather high degree of skill is a fundamental requirement for creative work. It is hard for us to picture an Edison or a Ford as being unskilled with tools. Satisfying experience with tools and

materials is the basis for all creative thought in the industrial arts field. People cannot think in terms of skills which they do not possess.

IV. ASSEMBLY. A good project is one that is made from several kinds of materials and requires skill and patience in its assembly. A difficult assembly job gives a good outlet for the boy's initiative, judgment, and perseverance. He will learn the essential nature of things and the nature of their relation to each other only by working with them. Each experience today is of value only as it is a vestibule to something new tomorrow.

Let us consider some project such as a wagon or scooter: The students make their own wheels in the sheet-metal department, the axles in the machine shop department, the forgings in the forge shop, the woodwork in the wood shop, and finally borrow tools, help, and perhaps sympathy from all of these departments when the time comes for putting on the tires and assembling the project. They will wrestle with these same materials and same tools later in life when their automobiles, airplanes, radios, and other mechanical devices need a few kinks taken out of them.

V. UNIVERSALITY. A project must be more or less interesting and useful to the great majority of the boys at the age level for whom it is intended if it is to receive a high rating generally among industrial arts problems. One boy in a hundred may be interested in making a Chinese counting board, while the other ninety-nine may be interested in a single project as an engine or motor. Emil Ludwig says, "Wherever men are, there also is the smell of machine oil."

It is true that modern educational theory tends toward individuality rather than universality. Theoretically, at least, each boy should have an individual project; one which is "tuned" perfectly with his capacity to perform as well as his special whims and fancies. Following this line of thought through to the end we will have to provide sewing for some, while nothing less than boiler making will suffice for others.

Actual teaching situations in the public schools do not permit such a flexible program, whether or not it is desirable. There are many restrictions as, time, space, money, teacher, load, equipment, and supplies which make the individual project idea unattainable below the ninth grade.

VI. COST. In the final analysis cost is perhaps the chief determining factor in project selection.

VII. UTILITY. Utility is the watchword of modern education. A project is doubly valuable if it serves some useful purpose after it is finished. One wooden dog holding a door open is worth two wooden dogs baying at the moon.

VIII. A project in the higher grades should provide for pupil directed activity.

So teach that they will want to learn.

It is my business to know my students and students in general, to know their habits of work, play and study, their desires, their needs, and their possibilities for being fitted for specific life pursuits.

It is my business to know how skills are acquired in general and by each boy that I teach.

Knowing these things it is essential that I consider them when I plan future work for them. And, finally, give them a chance to do more than they are required to do, to see more than they are shown and to try more experiments than they have seen tried.

Methods of Promoting Industrial Arts As a Part of General Education

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CONSIDERATION of the question as to methods of promoting industrial arts as a part of general education implies in such a group as this that such promotion is desirable from some standpoint or other, and we are prompted to inquire just where the angle of desirability lies. Is there a group of disconcerted industrial art teachers who feel that their work must be defended if their positions are to be retained and protected? Any number of questions as superficial as this could be asked and a solution would still not be reached for the real reason holds a much deeper significance.

A general education has come to be considered a practical necessity in a civilized nation and, intelligently organized and conducted, it prepares individuals to live and work together in a social group, but where does industrial arts belong in a general education scheme of today? A system of general education for any age and for any civilization is simply an organization built around the fundamental experiences which society has come to consider necessary for effective and satisfactory continuance. All such experiences may be classified into three groups, and correspondingly recognized as comprising three divisions of general education.

The first group of experiences have to do with elements which have been thought of as contributing most directly to the independent development and advancement of the human mind and human relationships. This group of experiences our educational leaders have led us to call "humanistic" and, in organizing formal education, have included in it such subjects as language, literature, history, civics, and fine arts.

The second kind of experiences deals with the discoveries and accomplishments of the race in understanding and mastering the laws of nature for the use of man. Educational thinkers have come to recognize the kind of education organized around these experiences as "scientific" and have classified under that heading such school subjects as mathematics, geography, physics, chemistry, and biology.

In the third place, the race has been concerned with the methods and processes by which the natural resources of the earth are secured, handled, and treated for human use. This type of experience has fulfilled as large a part in the continuance of civilization as either of the others and continues to maintain such a prominent position that it must be given appropriate consideration with the other two. This group is described as "industrial" and to it are assigned all the school subjects which will contribute to its most complete realization.

With these three groups of human experience recognized as the essential ones which deserve continuance in the education of the race it is obvious that a well-rounded general education should include humanistic, scientific, and industrial content. In connection with the public school system the question claiming some further consideration has to do with the relationships and comparative emphasis between these three essential kinds of education in the various parts of the school system.

The kind of education which may fitly fulfill the requirements of industrial education in the elementary grades has become quite thoroughly organized and accepted as an essential part of present-day education. The stage of school life apparently requiring the suggested promotion is found in the intermediate or junior high school grades, and we will assume, without further evidence to the contrary, that this is the point of attack to be centered upon in the present consideration.

When one thinks of promotion, there immediately comes to mind two distinct kinds. The first one which suggests itself is perhaps distasteful to the average educator, for it savors of an organization based entirely upon theory and thriving on propaganda. It requires an advance agent or a clever salesman, so to speak, and the delivered goods are often a disappointment. On the other hand, there is the kind of promotion which takes place more slowly as the result of one effective effort after another, all tending toward the same end and each making a valuable contribution to the cause while the process is going on.

Any sort of cause being promoted for personal, local, or temporary reasons might be promoted along the lines first suggested which may be likened to a mushroom growth. A fundamental aspect of education which involves as much as one-third of the experiences of the race most certainly must be promoted more slowly and ac-

cording to a much more substantial and permanent plan. Undoubtedly then, we are seeking means of promoting industrial arts as a part of general education because it is fundamentally desirable and essential rather than for any less trivial reasons.

When it comes to methods of promotion, there are probably some methods which can be used more advantageously by one individual while decidedly different methods would be used to greater advantage by someone else. There are, however, certain fundamental features which should be embodied in all efforts toward promoting industrial arts as a part of general education. In the first place, if you are a teacher of industrial arts, it will be necessary for you to believe firmly in the proposition yourself. You will need to establish or develop a firm belief that industrial arts has a rightful place in general education. You will need to see that it should have a varying emphasis from the kindergarten through the end of the junior high school. You cannot stop there, but must further determine the appropriate emphasis which is to be put upon it at the school level you happen to occupy. Furthermore, besides believing that it has a place in general education, you must convince yourself and be prepared to convince others that it is an absolutely essential part of a complete general education.

When once you have established such a belief in the fundamental value of industrial arts in general education, proceed to justify your beliefs by well-grounded and clearly-formulated philosophy. In other words, assume a professional attitude toward your work. If this is to be done in the manner similar to the methods followed in general education, you must trace the history of industrial arts as it has appeared in various relationships to general education throughout educational history. You must examine the reasons why industrial arts has appeared in various school connections. You must inquire into the developments at the various stages of advancement and evaluate the practice followed by yourself and others in conducting industrial arts. Ask yourself the question, "Does the philosophy which is attached to industrial arts education today arise from the practice which has been developed, or is the practice which is followed in accord with a sound philosophy which has been established?" After the past and present have been examined, proceed to look for possible modifications made desirable through industrial and social changes.

If every industrial art teacher were to think out his own philosophy independently, we might have as many kinds of philosophy as there are teachers. Accordingly, it is important for industrial art teachers, as well as for other teachers, to improve every opportunity for conference with other teachers of similar experience, both in small groups and in large gatherings. Thus the desirable points of each individual's thinking may be preserved by the group and the faulty

and erroneous thinking of each one sifted out. The final result is a well-seasoned philosophy upon which to work.

Thinking and striving solely in one's own field is not sufficient to maintain that field in a proper perspective to other fields with which it may have certain relationships. So a teacher of industrial arts, or a group of such teachers, cannot maintain the right perspective with general education without maintaining certain contacts with the general field. Let me advise you further, therefore, that you keep yourself informed of the developments in general education. Find out what the leaders are saying and doing about general education. Find out, also, what they are saying about your own special line. Stir up some reactions within yourself and among teachers like yourself, toward the theories which the leaders propose, remembering that reactions are not always adverse.

With a belief in industrial arts established, a philosophy formulated, and the theory of general educators interjected as a seasoning element, you are in a position to put industrial arts on a plane coordinate with that established in general education. If you are to do this adequately, you must prepare yourself as well to contribute to a complete education as the general teacher is prepared. In this connection the industrial art teacher, or any other special teacher, may take pride in the fact that such special teaching requires a background of preparation equal to the background of the general teacher and, in addition, special preparation for the teaching in hand.

In the organization of subject matter for teaching, arrange to make the work of each additional day, week, month, or term a step in advance of the one before by building each course on a definite sequence of teaching content. Such sequential organization may well be prepared by a group of teachers in the same manner that a sound educational philosophy may be worked out. With the organization perfected, proceed in class conduct to actually teach during each class hour in preference to wasting your time on routine details. Industrial arts has failed of recognition in the educational field because there has been apparent no definite teaching content at many points in the line of procedure. Pupils, in too many cases, have appeared to be marking time. Definite and orderly arrangement of informational content and manipulative content will go a long way toward eliminating such a difficulty and demanding recognition for industrial arts as a real educational subject. The success of any campaign, whether it be military, educational, financial, or political, depends to a great extent upon the self-confidence of those conducting it. The campaign to promote industrial arts as a part of general education is no exception. With a substantial background of philosophy, organization, and teaching the industrial art teacher need have no hesitancy in proceeding further to break down the barrier of class

feeling which has existed between teachers of industrial arts and general teachers. This barrier has often been thrown up around the industrial teacher by himself through a self-conscious feeling of a need for self-defense. There is an old saying that if you throw a stone into a pack of dogs the one which is struck by the stone will be the one letting forth the yelp. So the industrial art teacher has often condemned himself and his work as not being equal in educational quality to the rest of the school. It is true this support barrier has arisen to some extent from the general education forces, through a belief that industrial arts work calls for a lower mentality and a poorer accomplishment than other lines of school work. And again, the industrial art teacher may be partly at fault in allowing the work to have such a stigma attached to it.

Remember that industrial arts will not secure or maintain the place we would wish for it through criticizing the rest of the school, nor through lauding the qualities of industrial arts itself if the accomplishment is not in accord with the theories set forth. As teachers of industrial arts, we claim to be judges of material quality and claim the development of such ability in the pupils to be one of our strong objectives. In examining a finished article we recognize the work of the master by the quality of work in the article itself, and not by the claim of the maker nor the label attached to the article. Likewise, we recognize the quality of a life or the value of a division of education more by its manifestations than by its declarations, exhortations, or imitations. In school relationships, the industrial art teacher, the appearance of the department, the influence on the pupils, and the general effect upon the school atmosphere will be the most potential factors in establishing and maintaining a desirable position for industrial arts. These factors, together with the personality of the teacher, the vitality of the work, and the attractiveness of the product, will convince the pupils that this work is an essential part of general education. The satisfaction of the pupils, together with the expression of such satisfaction, and the material products which they are able to carry home will be the strongest factors in keeping this work in the right light before the parents and other school patrons. Finally, the promotion and establishment of industrial arts as a part of general education can be accomplished only through the combined efforts of teacher, pupil, school patron, and school administrator. As teachers of industrial arts, do not make the mistake of attempting to gain a place in the school system for industrial arts to fill, but rather make the work so prominently important that an adequate place will be provided for it.

Academic, Art and Industrial Education Are Combined in PRINTING

ENGLISH, spelling, punctuation, paragraphing, capitalization, correct designing, harmonious color arrangement, color mixing and technical processes always coordinate if Printing is used as an educational tool. In North American schools and institutions, from coast to coast, and from Hudson Bay to the Gulf of Mexico, instruction by means of Printing is making education a happy and interesting attainment.

TEACH WITH PRINTING

Costs of installation, outfit and supplies are usually much lower than those of purely industrial subjects which do not coordinate with academic and art phases.

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American Type Founders Company

F. K. PHILLIPS, *Manager, Education Department*

300 COMMUNIPAW AVENUE, JERSEY CITY, N. J.

Printing and Art Education

E. E. Sheldon

The Lakeside Press
350 East 22nd Street
Chicago, Illinois

IF PRINTING is a Fine Art, then printing education is a phase of Art Education and as such will be considered in this paper. Art education is well organized and fairly well developed in most of the larger schools and also in many of the smaller ones. The matter of application of Art Education to printing education is one of co-operation and vision on the part of the printing and the art departments in schools. The increasing interest in printing education and the growing conviction that printing is a fine art is leading to a marked improvement in the quality of the product of the printing departments. These improvements in quality augur well for the future developments in both printing and art, the one to show the way and the other to carry the message. Only by this closer co-operation and knowledge of each others problems is it possible to bring to general attention and support the two related subjects that above all others should lead the way in a broader general knowledge of art applied in every day life.

Printing is a subject that now demands the attention of education, and volumes galore are beginning to appear on the hows and the whys, the when and the where, and if one may judge by many of these volumes that are appearing, as examples of typography presented to those who teach, or pretend to teach, printing, there is great need of a little closer co-operation between the Art Department, the English Department, and the Printing Department, to say nothing of a little consideration by the Executive Department in differentiating between training and exploiting students in the Printing Department.

Recently a volume from the pen of a man with a national reputation in teaching circles was issued by a concern, also nationally known, to be used principally by teachers. Upon examination of the binding, one would remark, "A beautiful volume," backbone, sidestamp, cloth, cover design, all in good taste and harmony, but beneath that cover—words fail to describe the atrocities committed in the name of printing. The harm done by that single volume cannot be measured in any terms. The good that might have been done had just a little attention been given to detail was lost entirely. However, excellent the content, one reader at least lost all interest by the horrible example constantly before him. If one learns to know and love books, to ap-

preciate art in printing, a higher standard will be set in all things and art will come to occupy a larger place in life.

A recent volume from a well known house on a technical subject, bound in full morocco, a beautiful dress, covers a monstrosity that would cause the most hardened to weep for the future of art in printing. The makeup there was none; a folio (in romans) above a sunk chapter heading, chapters variously sunk, margins an unknown quantity, type pages centered on the page. Examples could be cited ad nauseum, but the point: We must teach art for art's sake and train students to enjoy the beautiful and have joy in making beautiful pieces of handiwork and then in every day work there will be joy in the doing and life will mean more.

Printing as an industrial subject, entirely apart from a vocational subject offers a training in the field of manual arts that should make it a part of every course. The attention to detail required by a course in printing makes the training of especial value. There is good training in any manual arts subject if the training be thorough, but if poor work be accepted in any line the training is not only poor training, but leads to the formation of bad habits that are hard to break. Training has to do with habit formation and habits have to do very largely with life.

The work in English, mathematics and design can easily be correlated with the work in printing and better work be done in each subject. All work in any subject should be done to conform to the principles of good design and accurate work with a reasonable speed attained as the worker progresses.

Printing as a fine art has training values in the elements of good design and correct English. There is no particular training or virtue in being able to place on end a few pieces of battered, broken, antiquated type, smearing them over with a cheap compound called ink, and taking a bad impression, wrongly placed on a nondescript piece of paper, and calling it printing. There is more danger in attempting to teach printing as a manual art than in any other subject that has yet been attempted in the schools. The ease in which duplicates of the work can be produced and scattered broadcast leads to the formation of low standards in a subject that is a fine art and as such should receive the study and attention that it deserves and did receive in its infancy.

Printing today ranks fifth among the industries in this country. The products vary from the beautiful handmade volumes produced by craftsmen who hold to the best traditions that the handicraft age bequeathed to us to the ephemeral publications, catalogs and circulars produced on a tonnage basis in great manufacturing plants operated by hundreds of machine operators, none of whom knows anything of the history or traditions of printing as a fine art. There is danger

in the conditions that exist that our inheritance will be lost and printing as a fine art will degenerate until we will become content with the commonplace and accept it as the best.

The history of printing should be a part of every course in Art in our schools, and the names and works of the master printers should be as familiar to our students as those of the great artists. The beautiful manuscript volumes of the middle age laboriously produced by hand with rubricated initials and decorative designs should be studies to show the causes that lead to the invention of printing and the sources of the early type designs.

The names of Gutenberg, Aldus, the Elzevirs, Plantin, Jenson, Caxton, Bodoni and Caslon, together with their marks and masterpieces, should be familiar to all students. The influence of Morris, Franklin, Thomas and DeVinne upon typography, should be within the knowledge of all. The type faces designed by the great masters should be familiar to our students and they should be able to recognize them as used in printed matter, and to know wherein lies the strength or weakness in design, always remembering that type is made to read. A Caslon type face should be as familiar to our students as to a printer.

Every course in Art should have as part of the regular work studies in samples of printing, critical studies of design, arrangement, color (from the standpoint of the printer) harmony, contract, balance, margins, appropriateness, until finally every student is able to pass judgment upon the quality of a piece of printed matter, be it letterhead or a volume de luxe.

With Art as a basis and a deep seated conviction in the eternal fitness of good models as the best silent teachers, and the ability to firmly refuse to be stamped into production, rather than maintain training first, printing offers excellent opportunities as an educational subject in the schools. Who shall do the teaching? Certainly the practical craftsman, who has been trained to teach, be he in school or in shop as instructor. One is safe in saying that no one unable to earn a living at the trade should presume to teach a trade. It is not theory that is needed but ability to show how the work is done that is demanded of the trade teacher. It is a much simpler problem to teach a craftsman to teach than to teach a teacher to the trade. We are very liable to under-estimate the training one receives who learns a trade thoroughly. We are apt to measure teaching and training values in terms of books.

Academic teachers have a legitimate field in a factory handling the teaching problems and welfare work, but as teachers they had better confine their efforts to the things they know and not attempt to teach a craftsman his trade. He may have spent many years in

close study, although in other lines, as his, so considered, more fortunate brother who completes a course in higher education.

In answer to "What is good printing" can we not accept the views of men whom the trade consider masters of the Art?

Before considering the book, let us study the principles that apply to the simple forms of work from the business card or folder to the more elaborate piece of advertising and in each case we find a different problem, but all based on good design as the basis of art, and no amount of general knowledge will solve the problem, as each case must be treated in a different manner, depending upon the fundamental principles involved, including size, use and expense.

"The chief factors which influence the appearance of a printed page are the design of the type and its arrangement upon the page. The ideal type for the book that is intended to be read should be so designed that the act of reading may be as nearly as possible unconscious. It should have a reposeful but sufficiently firm effect, carrying the eye smoothly along without any distracting features. The letters should so occupy the spaces allotted to them that they lose their individuality and continue closely into compact words. Any characteristics which produce a thorny or dazzling effect should ruthlessly be suppressed. Many of the types of special design exhibit some eccentricity often in but one letter which attracts attention and mars the general appearance. The lower case 'e' is a frequent sinner in this respect by reason of the angle at which the cross-bar is tilted; and the tail of 'g' is a troublesome problem. It would be invidious to exemplify these weaknesses, but those who have examined these types will readily recall instances. The preponderating use of Roman type is evidence of its superiority for general purposes. Most modern fonts of this letter follow either the Caslon or Jenson model. The former has the long letters tall in proportion to the body of the type and this gives the lines a more open appearance than in the Jenson style, which usually has a larger faced character with less difference in height between long and short letters and the lines thus seem closer together. The appearance of a printed page is also largely affected by the size of the type, the distance between the lines, and the spacing between the words. In the early part of the nineteenth century a comparatively small faced type with a liberal amount of space between the lines was in favor. A century later the tendency is to the other extreme, and we now frequently see a large faced type, the lines set closely together and narrow spacing between the words. Occasionally the customary breathing space after a full stop is so contracted that the break is hardly greater than between the words of the sentences, and sometimes even the paragraph is abolished and instead a small ornament is inserted in the line at the point where the new paragraph should begin. All this may produce

an artistic effect, preserve 'the color of the page'; but it is fatiguing and tiresome to read. The eye is so much occupied in deciphering the words of the print that the mind is not at full liberty to grasp the meaning the words are intended to convey. A book is much pleasanter to read if the words are sufficiently distinct not to require a sustained effort to disentangle them, and if the lines do not crowd upon each other but are clearly enough defined to be followed with ease. The spacing should correspond in some degree to the natural intervals observed in reading aloud. Good spacing, like good punctuation, is an aid to ready comprehension of the subject matter, and may be likened to phrasing in music. Certain established features of the printed book, such as title page, headlines and pagination which were adopted in the course of its development, were, doubtless, the outcome of consideration of convenience.

"In setting out to convert the manuscript copy of any work into a printed book, a number of questions at once arise. Chief among these are the format, (shape and size) of the book; the kind of type to be used; and the quality of paper; the illustrations, if any. One of the initial questions is, what shall be the format of the book? Many considerations go to the settling of this important point. The use to which the book is intended to be put; the subject matter; the extent of the manuscript; and even the illustrations, if any, which are to accompany it, or frequently which it is to accompany.

"Since the terms 'page' and 'leaf' are occasionally confused it may be observed that a page is one side of a leaf, and a leaf may therefore have two pages printed upon it, one on each side. The first page of a leaf, the right hand page of an open book, is called the recto of the leaf, and the second page, the left hand page of the open book, the verso. When every page is numbered the book is said to be paged; but when a number is given to each leaf only, the book is said to be folioed.

"The selection of the type to be used for a book depends in great measure upon the size of the page and the amount of matter contained in the work. If the book is very long, it may be necessary to use a small type in order to keep it within the desired compass and other considerations will have to give way, but in many cases the choice is unhampered by this condition. To make a presentable book, one that shall in the general appearance of its page satisfy the eye, and at the same time comfortable to read; the size of type must be carefully considered in relation to the size and shape of the page. The length of line, the number of lines to a page, and also the relative proportion of the margins have to be studied. The main thing to be aimed at is legibility. Too long a line of small type is trying to the eye, both in following the line and in picking up the next; while large type closely crowded gives a confused effect and is almost as

bad. The proportion of the margins on the four sides of the printed page has an important influence upon the appearance of the book. These proportions are not equal, and they are not haphazard. If all the margins were of the same width, the printed page would appear to be both nearer the outer edge and lower down than its actual position, as if the print were slipping off the page. Experts in such matters tell us that the aesthetic unit is not a single page, but that the two pages shown in one opening must be taken together, and that the margins to be of correct width should be in the following relative proportions:

Upper 1; lower 2; inner $\frac{3}{4}$; outer $1\frac{3}{4}$

"When the lines of type in a page are set close together without any space between them, they are said to be 'solid.' Sometimes the lines are slightly separated by means of thin strips of metal called 'leads' placed between them; the type is then said to be 'leaded.' A moderate sized type leaded is often pleasanter to read than a large faced type set solid, though votaries of the book beautiful would probably declare for all 'all overish' appearance of the large type. A page of leaded matter contains fewer lines than a similar page of solid matter."

Mr. Theodore L. DeVinne wrote, as follows:

"The average journeyman does not appreciate the skill and experience required for the best plain printing. He does not appreciate the superior beauty of a well-cut face of Roman type over any ornamental form. It would be a wise thing in schools of typography to have a young man study carefully the books that have been printed by the great printers of the world from Nicholas Jenson to Charles Whittingham. No doubt, he will find in any and all of these books some peculiarities to which exception can be taken but if he studies long enough and close enough, he will see in

The blackness of the ink
The readability of the type
The simplicity of the arrangement
And the general adaptation of printing to the subject

features which he but rarely finds in good modern work. A young man should be trained to do ordinary things well before he attempts to do what is difficult or eccentric. Educated people all over the world look upon a good book as the highest triumph of typographical art, and its merit is always gained by its simplicity. 'The last thing to learn is Simplicity.'

"To make a thoroughly good book out of a lot of jumbled manuscript, to select a type appropriate to the subject, to determine its size so that it shall be suitable for the matter in the book; to determine a page so that it shall be in fit proportion to the margin; to correctly determine by graduated size of type the relative importance of ex-

tracts, poetry, notes, preface, appendices, index, etc., to use paper, bindings, and lining papers so that they will be suitable to the print; to space lines neatly; to regulate blanks (whites) properly so that any reader can see at a glance that the whole book is the work of a disciplined hand and an educated taste, and that proper subordination has been maintained in all the little details from the space between the words to the margins around the page; these, I think, call for more of skill, more of experience than are to be shown in the most difficult places of ornamental typography. I have said nothing about the difficulty of keeping even color and exact register, and absolute cleanliness in presswork.

"I might go on and enlarge this very much but if any amateur or novice in typography thinks that the printing of a good plain book is a simple matter, let him try. A year of experience will make him a sadder and wiser man."

One who appreciates the Art required to design a piece of printing and then has the skill of craftsmanship necessary to execute the design and bring forth a work of Art is indeed a rare person, one whom the world delights to honor. If such is the case, what an opportunity there is for the teachers of Art and of printing to combine their efforts in training programs and create a desire on the part of their students to know and appreciate fine printing for Art's sake.

Many books are illustrated, and here again the Art or design students can find a field for their efforts and at the same time see their creative work actually put to some use. The steps necessary in order to make an engraving of any kind from the drawing to the finished plate will give the students an insight into photo-engraving that will be valuable as well as interesting. Book illustrations for the English classes is a field that requires the best efforts of able designers or illustrators. These suggestions are offered to show how the Art, English and Printing departments can and should co-operate in many of their training activities.

And finally as someone has said:

> "To business that we love we rise betime
> And go to't with delight."

Enthusiasm is an important factor in success, especially in an occupation so complex as printing; but how can one who is ignorant of the history of his occupation have a deep seated, impelling enthusiasm? Enthusiasm must be based on fine sentiments which a mere dollar goal never cultivates. When a youth is taught or learns to reverence his work he will be a better printer and citizen. I have known quite a number of master printers who were (or are) imbued with reverence for their work and all have been more successful for it.

Those who desire to know printing must remember that it is a question of years, not months, and that the title of printer is an honorable title and that the salary is commensurate with the effort required. Men with a vision who can see behind the type, design and beyond the type a work of Art may fill positions as artists or leaders in advertising fields.

Finally as we all have to do with printing in various degrees, let us learn to appreciate the best that can be produced, whatever it may be and accept no other and printing will remain to us as a heritage of great artists and we will all have learned to appreciate Art through Art and our joy in living will be the greater.

The Making of a Half-tone

E. P. DRUMMOND

Freeman-Gross Engraving Co.
Minneapolis, Minnesota

I WANT to say that I feel you ladies and gentlemen have really missed a treat in not hearing Mr. Sheldon personally. When he talks his speech is very much illuminated. He has a very fine personality, and as I said, I feel you have really missed a big treat in not hearing him personally. He is a fine gentleman and puts every point across and explains everything so thoroughly. Before I go into the technical part of my speech, I want to say with reference to his paper: I do not believe that the trouble today in the printing business is because the people lack education, understanding or interpretation. I think the education is necessary from the standpoint of the bosses. I believe they are the ones that have to be educated, because when a man is given a piece of work to do, it is a question in the boss' mind of minutes and hours rather than the fine work a man can produce. And I believe in time the proprietors are going to become educated to the fact that it takes time to do a good piece of work. That is what we have been aiming to do for a number of years. When a man gets a piece of work to do he has to slam it through or else get a calling-down from the office. The buyers are now demanding better work. Their education has been such that they expect it from the printers. The printers are now giving it a little more consideration, but it has still a long way to go. I don't know of any good-sized engraver who is not making money. I am proud to be in the engraving business. We still pay our men mighty nice salaries and get mighty nice work. So we have been able to give just a little more time and attention to the things more beautiful and to dolling up the things we produce. For that reason I believe we have set a sort of mark that the printers can

shoot at. We have a school and gumption enough to stick to it. We pay our men well and they have the time to fiddle around and get new ideas.

Now as to plates and half-tones: In the making of a plate for printing purposes, we have one idea in mind and that is to make a picture that can be printed well. If you were to go to a portrait artist to have your picture taken, it would probably take him half an hour to take your picture, arranging the various lighting, etc., on the face to bring out the various degrees of personality. We must duplicate that same procedure in photo engraving, only we do not have the person to stand in front of our cameras. We have the picture or the drawing the artist has created. We must go through the same steps as does the photographer. That is what we call making the negative. I am going to take you through the various steps of a half-tone: (Exhibited six pictures.) Getting a good photograph for reproduction is the hard thing. We turn down many, many of them before we start our work. We must start with a good picture. Here is a picture of a monument (shows picture). That photograph has not been retouched. We took this same photograph and retouched it with an air brush. That is the artist's work. Then we pose this photograph on a board as the photographer would pose you before the camera. We photograph this retouched photograph and get a negative just the same as a photographer does. First of all before the photograph is taken this glass (exhibits glass) is chemically cleaned so that it is *perfectly* clean and free from all dust. It is then flowed with albumen so that there is a coating. The glass is then flowed with collodium and then immersed in a bath of silver nitrate. This rubberizes the collodium and toughens it and binds it. The half-tone screen is polished before using. This is the preparation of the negative. Now we take our camera and take a photograph of the photograph. The photographs are all graded and given different exposures. Some require longer and some shorter exposures. After the glass is all prepared the half-tone screen is placed in the camera in front of the actual plate to be developed. That screen is a series of dots 133, 120, 65, 85, 110, to the square inch all depending upon the purpose for which the half-tone is wanted. For newspapers 65 screen—that means 65 dots to the square inch. For the magazine sections of newspapers we use 70 dots to the square inch. Country newspapers, 85 screen; campaign cards, outdoor tacking signs, 100 screen; bond papers, 110 to 120 screen, depending upon the smoothness of the bond finish; ledgers, 110 to 120; enamels, 133, 150, and 175 for caskets or furs. The screen in inserted in front of the glass before the exposure is made. The lights are turned on and the photographer does just what he would do in taking a picture—gives it short or long exposure. After he has made the negative, he takes his negative and coats it with rubber and collodium again on top

so he has a good thick surface. Now the trick is to get that off the glass so it can be really printed. The negative is soaked in an acid bath which loosens up the entire negative. It is then given a good bath in water and the water is squeegeed out of it. The next step is what we call printer and stripper work. The collodium film, which is still on the glass, is given another good bath so it will loosen up, and put on a sensatized plate upon which is thrown a tremendous light—just like printing in a photograph studio. You do not see this film come off. It is sensatized metal. There are no dots on it. This is a print. Next it is rolled up with ink. Then the ink is washed off and just the part that is printed remains. It acts just exactly the same as a sensatized piece of paper. This is what we call a silver print. We can sensatize the copper plate with albumen, though we buy our plates all sensatized. The idea in getting a print is to get the outline of the object. After the process has gone this far all the dots which appear in the negative are on the plate. Every little dot is there. It is again rolled up with ink which is burned in over a gas flame, and then washed off again. It has been found that ink will adhere to those little dots. The print is then put in an acid bath and these little dots being protected by the ink which adheres to them, remain where they are. The background is eaten down. Now the plate which has acid-resisting qualities is powdered. The powder adheres to the base of the dot. It is powdered four ways. The etching, or eating, can now be carried down deeper and deeper. The trick is to get that half-tone just as deep as possible without injuring the base. Here is a half-tone that has had one bite (exhibits half-tone). Feel the indentation.

Magnesia is what the engravers use in testing their plates to see what depth they are. The object of the next step after what we call a bite has been taken is to flash up all the highlights and bring out all the sharpness possible. So the etcher, the man who handles the acid, tries to retain all of the blacks and tries to get the middle tones and grays where they will bring out the object itself. This he does with a brush, dipping it in a solution of iron. (All of this was illustrated.) An etcher can hold the parts he does not want to etch. After the plate has been given several bites, the finished plate, is produced and sent into the blocking room, beveled and put on a block and then sent to what we call the finisher. He is probably one of the most important men in the establishment. He is the one who gives the outline finish, takes out defects, acid spots, etc. He goes down for depth. He is the general inspector of all the work. He is invaluable in an engraving establishment. You see what he has done: (exhibits half-tones and illustrates.)

One of the things with which we have to contend is, of course, getting good copy. I believe the more people know about engravings

the more careful they will be in getting good copy. You can see what sales value there is to a photograph like that: (Exhibits.)

Now I want to explain to you, finishes: (Exhibits a number of different finishes.) It is necessary to know these finishes if you are dealing with an engraver in order to be able to tell him what you want. These are all done with the air brush. There are just about three or four finishes.

I want to show you how to figure costs on a half-tone without the scale. Half-tones only up to 14 x 14 and zincs up to 14 x 14. Take the number of square inches, say a 2 x 4 plate, making 8 square inches, multiply by 15 and add $3.00. The result is $4.20. Remember when a cut 2 x 4 is desired ¼" must be figured for block. That is on a half-tone. For a zinc etching multiply the number of square inches by 10 and add $2.00, the result being $2.80. That is up to 14 x 14. Anything over that is 12 cents a square inch.

Question: What is the average depth of the ordinary plate? Answer: It is made just as deep as possible without eating through the metal. It cannot go as deep in 150-175 screen and still retain the dot. On fine fabrics the use of 150-175 screen is preferred.

Question: Why do you put enamel on half-tones? Answer: We do not put any on. That is the sensatized metal. We protect it so the acid won't eat it away. The enamel thus formed is what keeps that dot from being eaten away.

Now we will take a zinc etching and do the same as we did with the half-tone. (Shows drawing.) It is photographed in the same way as was the half-tone, only instead of putting the screen in front of the negative, there is only the sensatized negative. The same process is carried through. The collodium-coated plate is slipped over onto zinc instead of onto copper. After this print is obtained (illustrated) (feel there are no indentations there at all) we turn it over to the Ben Day men. The various patterns available are illustrated on these sheets. The one selected is laid on with the plate (invented by a man by the name of Ben Day) after some ink has been put on and in the place where the Ben Day is to be laid (see those guide lines there) and a piece of guttapercha placed across it. Here is a print with the Ben Day that has the little pattern on it (you can feel how that has been eaten in here). There is one thing in zinc etching that is far more necessary, and that is the powdering. It is powdered in this way (illustrates) with the brush, and then this way, and after powdering each way, the plate is set over the gas and the powder is baked on to the base. The indentations are then well protected. Then it is set in and beveled. Then it goes to the proofer and finisher, who picks out any deficiencies. It is practically the same as the half-tone process with the exception of the use of a screen. (Illustrations.)

Question: How do you keep the Ben Day from lapping over? Answer: You see here? That is his guide (illustrates). There is not a step in the making of a photo engraving that is mechanical. Every man must mix brains with his work. He must be an artist first, last and always. One little slip just means starting all over again right from the beginning. It is not at all uncommon to make over a cut three or four times trying to bring out this or that, and sometimes the finisher can save it, he may be able to pick up the dots, but nine times out of ten it means starting over again. This Ben Day process is unusual. The workman matches and blends in the various screens. The manipulation of the Ben Day screen is something which really requires the skill of an artist. Process work is good for a day's discussion in itself, so I did not take you into that. It is the object today to get people to appreciate good pictures. I want to show you a few specimens: (Exhibited prints in which their artist had put modern background.)

Up until three years ago Minneapolis was the largest engraving center in the United States. Engravers all make pretty good money and we have been able to attract some real men. The Minneapolis Bureau of Engraving has one of the finest Ben Day artists in this country, Mr. Leighton.

Water color process: There has been more hokum in putting across this water color idea than anything presented in the printing industry in years. It is not necessary to have anything to print water color inks other than water color ink and glycerine. If you do not believe it, look at this job: (Exhibits in water color.) I am going to give you the formula. We find that by taking ordinary zinc etchings and roughing the surface of them just a little bit, and doing certain tricks to the rollers which you already have, you can produce the same thing without so much down and so much a month for royalties. I will tell you the way this job was actually handled and you can write it down: Wash the rollers very carefully with gasoline. I mean saturate them. Let them stand for a few minutes and then wipe off the parts that are not dry. When thoroughly dry, wash with alcohol. After the alcohol is dry, wash with glycerine. After washing the rollers with glycerine, put glycerine on platten. After it is thoroughly worked in, wash rollers and platten with water. That is the way this work is done. When you get through, reverse your steps in the same order in which they came up.

Question: Did you experience any trouble with humidity? Answer: Yes.

Question: What would happen if you did not rub the plates? Answer: Water color inks are fluid, have not much pigment, and unless the plates are coated you have a mottled effect that is not produced with this roughing.

Question: Can you secure as strong a color with the Ben Day as without? Answer: Ben Day is used only for zinc, and if you want to get gradation of tone, the dots bring you that gradation of tone.

It has been a real pleasure to spend this time with you, and if you have carried away just one idea that you can put into practical use, I shall feel that my time has been well spent.

Design in Relation to Industrial Art

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WITHIN a hundred years we have seen the rapid growth of industry, the birth of machinery and the triumph of science. So overwhelmed have we been with the multiplicity of ideas in invention that the physical and mental capacities of men have been taxed to the utmost. The machine would appear to have achieved an almost complete triumph over the hand of man.

The diminishing spending power of the dollar has nevertheless brought about a complete change in the public attitude and in many ways through force of economy has resulted in the throwing overboard of many of the vulgarities which have for generations been accepted as beautiful design. Also the complete change in public attitude has, through improved taste, compelled the manufacturer on his part to cut loose the traditional trappings in order to meet a saner demand. The economy of means is the greatest test of artistic endurance. Since the Great War we have been passing through a refining process; ideas have been filtering through and have in many cases gradually attained an extreme simplicity.

It was inevitable that objects of use and beauty should, in the hands of the designer and craftsman, have this objective. The quips and curls which were the admiration and astonishment of those who found satisfaction in meritorious display, whose conception of design was purely of a period style, although still holding an important place in the minds of many people are giving way to types more expressive of the age in which we now live.

For years the public has been on the verge of nervous exhaustion; it could not keep pace with the overwhelming developments of modern times, society was, and indeed now is entangled in so many and varied movements that it must needs cry out for relief. We cannot pass from traditionalism to modernism without transition. And it is in this transition that the public is mostly puzzled. Modern design in industry has not come like a thief in the night, unheralded, it has come with the blast of trumpets. Through the efforts of

distinguished designers a new field would appear to have been opened up; but alas as is always the case in great movements or innovations the small fry and army of incompetents are in many cases virtually riding on the backs of the strong men, expecting to get a pleasant ride into the hall of fame. Our exhibitions are being filled with the efforts of young artists who are squeezing their strength into the shallow mould of mannerism.

At times in the past the arts have reflected the ideals of an era and proved a lasting fruit of civilization. Much of the work of today is completely indifferent to the requirements of life or civilization. There is the battle between the naturalness of strong men and the artificiality of weak men, between the innovator and the imitator, between the sincere and the insincere. Many are looking upon so-called modern design as an easy way out of the responsibility of true creation. Let us not be deceived on this matter. True modernism, if one may accept such a term, is a revolt against academic sentimentality which had been running riot during the last century. It has sought to clarify certain underlying principles and elements of beauty into a greater simplicity, and this is the real test of knowledge and skill. Beauty is simplicity. We are not seeking for qualities of beauty through a complete disregard for the things which have gone before, for we recognize that the pyramid is just as modern today as it was centuries before the Christian Era.

Modern is only a chronological word. Even in the language of art criticism it is the opposite of ancient. Its meaning is conditioned by time and the effects of time on opinion. What is modern today may be ancient tomorrow, at least from the altered perspective of two or three centuries hence. If we accept modern in terms of cubism I can show you its parallel in the work of Neolithic man. If we accept as modern the type of archaic sculpture so frequently to be seen in these days, I will show you something equally as modern either in the bas-reliefs of Assyria or the facades of Gothic cathedrals. The pottery and gold of Mycenean tombs are not far removed from the more conscious efforts of the modern designers. The truth is we are too often worried about the stylization of forms in design and not sufficiently concerned with the purpose of design.

If we accept the philosophy that "The line of beauty is the line of service," where do we look for its most potent expression? Is it coming from the so-called handicraftsman? Is it to be found in the decorations of modern restaurants? I venture to suggest, at the risk of incurring your displeasure that the line of beauty is more clearly seen at this time in so-called machine objects than in the hand made objects.

Modern manufacture is arousing public attention through the brilliant advances it is making into hitherto unexplored regions,

indeed without a parallel in the history of manufacture. The automobile as an artistic achievement bids fair to become the most outstanding object of beauty in industrial research. Railway trains not only in their planning but frequently in their interior decoration reveal an art little dreamed of two generations ago. Modern steamships are not only triumphs of engineering skill but are truly artistic achievements.

Think of the devices in the home—the product of the machine: refrigerators, stoves, vacuum sweepers. We cannot study these things without realizing the studied attention on the part of the manufacturer to problems of color and design.

The president of one of the large banks a short time ago said, "The great hope of industry lay in its union with art." The manufacturer and business man has had a keener vision of art and its possibilities than the so-called artist.

I could tell you why one gasoline station is more active than another, why this store is more progressive than another. There is so frequently only a subtle difference between a fine and an ordinary thing, between the ideal and the commonplace, and the manufacturer knows this. The attitude of the executive in business has changed completely. And why? Let us go back a few years to that period when countries first realized the importance of design in industry. We will not consider the best periods of ancient art when design and industry were inseparable. Let us consider the more modern aspect of the subject.

We may take the World's Fair held in London in 1851 as the focal point of interest. It was organized by the men of England in order to demonstrate what was thought to be a supreme position in the field of industrial art. They invited competition with the rest of the world, but the stern fact was soon to be realized that England was behind in the race. It was clearly demonstrated that France was in a superior position and was well on the way to capturing the world's markets. The year after the fair Cardinal Wiseman made an address in Manchester in which he said, "The exhibition showed that, though we made magnificant things in silver work, and gorgeous objects in metallic production, beautiful and splendid; yet, when you came to look at them with the artist's eye, you could not help observing the immense difference between our English products and those of France." He further pointed out, "the best products of the English goldsmiths were by imported workmen; and it was thus we did produce some objects that stood in competition, not with those of the workman's rivals, but with those of his own countrymen."

In recognition of this inferiority immediate steps were taken to establish a great national museum as a repository for works of industrial art. This was the beginning of a great art education move-

ment. The great lack was felt in an insufficient supply of libraries and schools of design.

The World's Fair of 1851 brought about national action. It showed to the astonished world England's supremacy in machinery and manufacture, but it revealed the hideous character of design and craftsmanship. Art in the public schools was so utterly neglected that in 1881 a Royal Commission was appointed to see what was the matter. Competing industries at home and abroad were visited. It was found that whereas only one-fourth of the children in England were taught drawing, the continental schools gave all pupils drawing. It was even argued by distinguished educators in France that drawing and modelling were more important for the artisan than reading and writing. They contended that the artisan might pass through the world ignorant of his letters, but that he would have to earn his living with his hands, and in proportion as he used them skillfully and tactfully his living would be assured. What was the result? After the Franco-Prussian War France was able, through her well trained craftsmen to pay her war debt to Germany. Even today we look to France for the lead in art. Most of the outstanding artists in the United States today have received their training in France.

After inspecting one of the best-equipped Art Schools in France, the Commissioners asked the Minister of Education the cost of the building and its maintenance. He cheerfully replied that he did not know the cost and did not trouble to enquire; "for" said he, "it is not France but England and America that pay for our art schools, by buying the beautiful manufactures and designs which the schools have enabled the French people to produce."

Both England and Germany were at this time waking up to the necessity for more intense training in the industrial arts.

What is happening in England today? Art is taught in all elementary and secondary schools. Manual instruction has been considerably developed and the schools of art were never so effective as they are today. If you turn to the industries that have the blending of beauty and utility, whether in the working of the precious metals; in the forging, casting and shaping of the commoner metals; in decorative work in wood, stone and plaster; or in furniture, pottery, textiles, and pictorial art, a commanding position has been registered. I well remember the good impression made at the Exposition at Paris in 1925.

Up to 1872, according to the British official report, England had established 122 schools where industrial art was taught. Up to that time there had been established one well-appointed art school of 190 students for every 210,000 of the population. This brought about a surprising development. The schools grew up with the local industries and had, to some extent the co-operation of the industries. Com-

mercial competition was the largest factor in pushing forward a movement for art education during the second half of the nineteenth century.

Now let us turn to the United States. In 1919 George C. Nimmons, made the following statement before the National Council of Education:

"Art is a national industrial asset. Our chief commercial rivals are all in advance of us in this, and are even now actively striving to increase their lead. In individual business, the possibility of great supremacy—in the use of scientific devices, in efficiency of production, in economy in materials, in the development of profitable by-products —no longer exists. Beauty in design remains practically the only possible means of achieving an individual triumph." Consider the labor conditions of Europe and Asia. Think of the low rate of wages, and in spite of a high tariff wall think of the position of the American designer and manufacturer. How can he for instance expect to compete in the field of ceramics when in spite of the tariff foreign goods can come in cheaper than he (the American manufacturer) can produce them? What is the answer? There must be such distinctive qualities of design and craftsmanship as will appeal to people irrespective of price. Beauty and utility must come together in the fullest measure.

See what this has meant for the automobile. The development of this object has pointed clearly to a continuous improvement in body design. No doubt America leads the world in this field. Should it fail in this regard the public is immediately sensitive. We can point to cases where there has been a distinct falling off in sales through a deterioration of body design. The advertisements relating to automobiles frequently point to the great art epochs from which inspiration for beautiful proportion and lines have been drawn.

Some time ago I learned that a large corporation had made it possible for its executives to take courses in design. I sometimes think that in our courses on art appreciation we are inclined to stay too closely with the so-called "Fine Arts" forgetting that the industrial arts may also be fine. Perhaps the distinction between the fine, industrial and commercial arts is gradually being broken down, for after all the only thing that matters is good art.

If it is true that in America great developments have taken place in those objects which are the product of the machine what is happening to the man-made objects which depend upon personality and fine sensitive craftsmanship? Why is there a high wall existing between the school and industry? Why do industries resort to the making of objects of adornment such as tin ceilings made to look like plaster, embossed wall coverings to look like leather, metal cornices to look like stone. These are the things people have been worrying about. It is

so easy to fall into the trap of artificiality. The hand should not attempt to do what the machine can do better. But there are certain things which are the inherent expression of the cunning of the craftsman's mind and hand and can never be produced by the machine. Beautiful craftsmanship must have personality; it must have its foundation in truth, for as William Morris said, "Truth is beauty, beauty is truth."

It was with the fullest realization of the importance of this unity of design and industry that a Commission was set up in the United States in 1919 to investigate the field at home and abroad. It is true that while the European countries were forging ahead in artistic manufacture, for years the United States was content to supply the machinery to decrease the cost of mechanical production, and also to supply the raw materials later to be returned in artistic form.

During the last forty or fifty years, however, studied attention has been given to the subject of art in education, not only in the training of designers and craftsmen but also in the appreciation of the arts. Indeed there are few countries so generously disposed at the present time to art education in public schools as the United States. It is perfectly obvious however, that in relation to the size of the population, the number of schools set up for the training of designers and craftsmen is quite inadequate.

The Commission's report above referred to showed that a survey had been made of 510 producing establishments and 55 schools giving instruction in industrial art.

The World War revealed in a striking manner the dependence of the United States on European designs. Importation of artistic goods ceased to a large extent. With the abundance of money to buy artistic things and yet with the market cut off, the need for skilled designers and craftsmen was brought out in strong relief. The report showed that the schools were not functioning with enough success to produce designers to meet the new demands. It is a well known fact that for years the United States had depended on foreign designers and craftsmen, and while a generous attitude had been taken in regard to the training of appreciators there was a lack of understanding as to the relation of the schools to industry. The report showed that fabulous sums of money were being spent on those products which are the result of skill in design, not only from the purchaser's point of view, but also from the designer's. For instance, the clothing industry, ranking second in the manufacturing industries of the United States. Even as far back as 1914 the value of the product in New York alone amounted to $339,843,000. At the time of the survey it was revealed that salaries for dress designers ranged from $50 per week to $25,000 per year.

I could mention other industries such as textiles, metal, furniture,

ceramics, etc., the production of which involved enormous turnover. However, I do not wish to weary you with figures. I wish to emphasize however, the opinions of establishment representatives. In most cases it was agreed that the training at present given in the schools did not measure up to requirements.

It is perfectly true that every branch of industrial art must be treated individually as far as training is concerned, and that only through intensive study of the subject can one receive adequate returns. The economic value of design and craftsmanship can be easily understood. An artistic people will take one dollar's worth of raw material, and by converting it into an object of beauty, make the product worth five dollars in the world markets. An inartistic people will take the same material and turn it into an object worth perhaps only half as much.

It has been only too often demonstrated that ugliness is an economic waste. We only have to look at the many buildings being torn down in the cities, buildings of only a few years standing, to realize that no stone or steel can last as long as a good architectural idea; that reinforced concrete is of little value if it is not harmonized with fine architectural structure and proportion. The depreciation of ugly buildings is rapid. The depreciation of ugly furniture is rapid. Failure to recognize the function and beauty of a structural object spells doom for that object. History shows that a beautiful object enhances in value with age. Beauty never depreciates. It must bear the stamp of the spirit in which it is done, but this does not necessarily mean ornament. Problems of design are not necessarily problems of ornament. The unadorned can never stand as low as that which is falsely adorned. It is the business of art to use the materials given to us by nature in a way that their identity will not be lost. Think of the utter waste of time in trying to make material appear to be that which it manifestly is not! How often has material been brutalized through meaningless veneers and brazen bedizenments! We are so apt to confuse ourselves between the serviceable and the artistic. They should be one. The function of design is to give form to knowledge and grace to utility. I can think of no stronger reaction against flamboyant art than in France at the present time. Think of the traditional ornament growing up with an age of careless frippery. The irresponsibility of the French Court was reflected in all modes of extravagance. It could not live under the dead weight of the Baroque. It took France many years to realize this, indeed only since the war has she realized the awful nightmare of much of her ornamentation. The exposition of 1925 was a revelation of extreme simplicity. It may appear at times to be effected and yet this simplicity is a natural reaction following a period of nervous exhaustion. It means that beauty and utility are once more being united. It means that real art

can arise only out of a real, living problem; it cannot result from a repetition of a historical formula. True art will always be the adaptation of fundamental ideas to the peculiar necessity of the time. It is the ability to turn the common object into something beautiful that characterizes the true artist. The words of William Morris are still true—Art without industry is guilt; industry without art is brutality.

Emerson had a wonderful vision of the function of art in industry when he said:

"Give to barrows, trays and pans
Grace and glimmer of Romance."

Sometimes we are told that utility is itself the essence of beauty; that is, our consciousness of the practical advantages of certain forms is the ground of our aesthetic admiration for them. Before we are conscious of the beautiful decorations on Greek ceramics I wonder whether we are not more conscious of beautiful shape, a shape not only aesthetically beautiful but useful. Can we not discern in a Sheraton chair useful structure, light and elegant, yet with such strength and elasticity that the ravages of time cannot destroy. Beauty grew out of its use. Look at the furniture of the decadent period of the Renaissance. The voluptious ornamental treatments only served to rob the objects of their function.

True design grows out of the structure; it is not fastened on. The purpose of decoration on structural objects is not to draw the attention of the observer to the representation of ornamental forms, but to the beauty of the ensemble. Some of the greatest technical achievements of Grindling Gibbons are only clever tricks at representation. They do not convey true decorative values. If ornament is used it should seek to enhance and beautify a structure rather than detract from it. This phase of the subject is alone sufficient for a paper of this length. If we accept the theory that use and beauty are inseparable, such can only come about through a right use of materials and through a right application of the laws of design. These laws are the same yesterday, today and forever. The healthier growth seen in much modern design both at home and abroad is the result of a direct response to these principles. The newer development is going to demand a more thoughtful and scholarly study of design problems. It is going to be the greatest test of skill in design and craftsmanship we have yet experienced. It has to show how the machine and the craftsman's touch can work without becoming antagonized. "Beauty must come back to the useful arts and the distinction between the fine and the useful forgotten. In nature all is useful, all is beautiful. It is therefore beautiful because it is alive, moving, reproductive; it is therefore useful because it is symmetrical and fair."*

* Emerson.

The Relationship of Modern Art in Industry to Teaching

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REGARDING this matter of Art in Industry, we must get an idea, even though it be a vague one, as to how industry effects art, and art effects industry.

Let us regard how industry effects art. First design, that is, the manufacturing and process of manufacturing influence the designer in his work. The cost of manufacture limits art. Simplicity is one of the results of manufacturing costs held down. Process too limits. Workman's methods influence design and art in industry. Mass production influences greatly. These I think, without going into detail, are obvious causes and results.

Then art effects industry, too. The designer introduces very often into the factory new methods of work and new processes of manufacture. Style (mode) in design and art also effects industry—particularly, selling. At the present time this is quite obvious: Some designer creates a new style in an article, for example color in bath fixtures, colored sinks, etc. That very definitely influences the market, the manufacturing and the selling of sinks, does it not? People are moved, then, by style, mode, or fad. A manufacturer comes forth with something a little bit different. Mrs. Jones buys one and all of her neighbors want one like it. This might be fortunate. The results so far have not been too fortunate, but a well-grounded designer can do much for industrial art, bringing it to a level of beauty, with common sense, and move the buying public toward more beautiful surroundings, more beautiful articles of wearing apparel and necessities of life. Simplicity in the designer's work also effects manufacturing cost, and so we go round and round in circles. Unfortunately art and industry are not quite as closely joined as they might be, and so we have a tremendous amount of junk unloaded on the market, and the buying public not being able to discriminate—only being moved by leaders—often times untrained leaders, buys the junk and regards it as beauty without thinking, trusting to authority to think for them. Alas, too often those in authority are too busy money grabbing to do so. This influence of art on industry is obvious. There are many more ways no doubt which we all can readily run down.

Let us move on then because my subject deals essentially with "modernism." The term is unfortunate. It should imply *contemporary* art. How now does this thing known generally as modernism—this movement in art—effect art in general? First, this new attitude has untied art. No more rules in painting except those of the individual. The artist now does not go to a school to learn a set of rules. He does not go to learn that certain lines are beautiful and others ugly. But he learns rather to distinguish beauty in a more abstract way thereby enabling him to make his own little set of rules that work in a practical manner. Modernism has introduced to art new individual laws—new sets of theories—many of them. Each modern artist has something different to say from his brothers. It has made for freedom of expression. Any one can say what he believes, provided he thinks while saying it. He can say it anyway if he wishes it not to last. Modernism has meant simplification—"hew to the line." To give your impression, your mental picture, of the subject at hand rather than tell all you know about it, seems to be the modern way. Give your reaction upon seeing something instead of putting down all that you see. This is important in modern thinking.

Modernism in art has caused the artist to emphasize design and pattern. In forgetting about details, he has forced his subject matter into design—creative design—a pattern that is his along. That is why modern painting is so interesting to me. Each artist's work is a new creative design. Nor does the crass one find the joy that a sincere and earnest artist does in creating a new design in each picture he paints.

All this has made way for individual expression and beliefs in art. He who believes sincerely that he is right in what he has to say and says it is a modern artist. It means, then, that new theories have entered into sculpture and painting. Modernism has even gone so far as to introduce new arts. Do you realize that? Two of them are most obvious. One is fourth dimensional painting—a combination of sculpture and painting with most interesting results. Whether you like it or not the artist's theory is that a fourth dimension is suggested by the combination in the same manner that a third is suggested in painting which is in reality only two dimensional. I assure you that when you look at the work of such an artist you will get some reaction. At any rate it is a new art. He discovered something and is saying it. Take it or leave it. The second is the color organ, Thomas Wilfred's discovery which has to do with mobile color. Instead of colors being flat on a two dimensional surface in his paintings they are out in space. He has a machine similar to a pipeorgan, having a keyboard, and by playing certain themes and melodies on the keys beautiful compositions, which have a third dimension very definitely, are shown in color. A principal theme may be carried through in one color while counter melodies in other colors play on either side, above

and below it. You will find this most interesting if you take the next opportunity to see it. No doubt much will be done with this new art along practical lines.

Modernism, then has made art free, a living, moving thing; always interesting, ever new, because each individual artist who has something to say, says it and is listened to. There have been too many parasites, unfortunately, insincere artists, who, seeing some one doing original and interesting things, have taken them up for commercial use. So we have in industrial art, particularly in America, a great deal of so-called artistic junk. This individuality—this modernism must be made a real, living, beautiful thing. Only when it is that will it live as part of life. I think it most logical that in making beauty a part of the individual life we will be helping mankind by giving him a more convenient and comfortable life as well as a more beautiful one.

How has modernism effected art teaching? I told you in my talk last night what I thought about it: That in making art a part of life, instead of an abstract thing there were certain things the teacher had to bear in mind and, provided he or she was sincere, that teacher could do many things to help make such a condition possible, particularly through three dimensional work. It means that teacher has to regard construction and theoretic work as important, not to work from nature so much because art should be kept separate from nature. It is beauty of a different sort. It means that industrial art teaching is of utmost importance to modernism.

First, let us regard how modernism has particularly effected industrial art and industry and then try to interpret it all in terms of industrial art teaching. To do this we must know what changes in industrial design have caused this modernism. At first, quite a long time ago, it was just a little flourish here and there—an individual stepping forth; he was listened to by a few but did not come to the fore until later. He changed only forms. For example instead of using a regular flower form that had been used before in design, he created a new flower form, more or less abstract, and used it in all his designs. This resulted in a matter of style in industrial art. Even in 1925 in the Paris Exposition we find the furniture designs with only details changed, basic shapes remaining much the same. Gradually other changes occurred. Industrial art has become a simpler matter with emphasis on form before design. Style is almost eliminated. Grand Rapids tried very hard to make a style of one or another of the French designer's theories but fortunately copied badly and failed.

Modernism in industry is settling down, I believe, to rather a definite thing. I think it has to do that eventually because all of the real modern designers of useful things seem to have the same things

foremost in their minds regarding design which apparently do not detract from this most important matter of freedom. These things are in order: Function, materials, construction and setting.

Function or use is foremost in importance to the modern designer. A chair, in short, must be made comfortable as the reason for the chair's being is man's need for relaxation and rest. If it is not comfortable, it is not a good chair. Reasonably, function is most important.

Materials have become more important than formerly because of the simplicity involved in new design. Not so much ornamentation is put on, so the artisan in wood must use a fine piece of wood in its natural state making plain surfaces beautiful. The designer in metal must see that his plain surfaces are beautiful and varied or the article designed will be monotonous. Various materials are used together for different effects. New materials are being brought forth—celluloid, vitrolite, new metals, more durable and practical materials, materials, of lighter weight and more flexible. New materials are being used because of function—lighter-than-wood-metals for airplanes, etc. In textiles vegetables are used for threads. And rayon is rayon, no one has tried to call it silk. It serves a definite purpose, it functions in a certain way. So it should be with all new materials—they are of our age and no other, should be regarded as modern and contemporary, and kept foremost in the minds of modern designers. They are the things whereby we move on instead of stand quietly by as we have for so long.

This matter of material has necessitated more attention on construction. The designer of the chair first thinks of it as a chair—so many inches from the floor, etc.—then regards construction. It must hold up because persons sitting on it will weigh so and so many pounds. In short it must be well built.

In regarding background and setting, he asks, will both men and women be sitting in this chair and of what sort of room does it become a part. The answers determine line and color. If it is to be used in a woman's boudoir, the designer selects light, restful color and incorporates more curves than he would in planning it for a room in which both sexes mingle. Personality too is an influence you see.

All of this in industrial art is a matter of rationalism and naturalism, working out in a natural way these things which influence the article to be manufactured. It seems to me very logical and very orderly to think of these things as important. Remembering for instance, that cloth is cloth before it is flowers and leaves. This idea has introduced among other things the very interesting Rodier fabrics which used combined kinds of thread, as wool and rayon, to achieve their design.

Now, how has all this in turn effected industry? It has created a

more flexible, versatile factory. Because of the varied ideas and the combining of more materials we must have more versatile workmen. It has caused more special work in manufacturing and therefore has involved more money. Perhaps that is why many modern articles are so costly. Some designers particularly the French, go so far as to design one chair for a certain room involving of course a great deal of expense. Simplicity sometimes saves manufacturing cost, however, atoning for this specializing, no doubt. More thought has gone into the factory than ever before. The factory superintendent must know more about more things than he ever did before.

You may conclude that this effects your industrial art teaching, which involves a great deal of industrial art in a modern way. It makes certain things more important than they have ever been before. All of your students must know what chairs are for and what everything to be built is for before they begin. The most important thing being function, the student must know the use and purpose of the article he is designing or building. Secondly, knowledge of construction is important. He must know all the possible ways of using the materials at hand. He must know if nails can be driven into it or if it can be bent or cut. Naturally he must know what metal is best used for, that it can be cast, rolled out, stamped, etc., so he can use metal in one or more of these ways. Wood can be sawed, carved and certain kinds can be bent. Through this he learns to use wood to its best advantage. The same holds for paper. He must be master of all possible materials that he may contact. All this before touching on design theory and principles. Knowledge of materials too is important. He must know the different kinds of wood, metal, etc. Perhaps he will discover a material that has not been used in a certain way. Perhaps he will discover a lighter metal, more flexible to serve a new purpose. He must study, in short, all the things to be utilized in design. He must know the settings and backgrounds for things—when and where a lighting fixture is to be used, for example. The background influences the article he is making, particularly now. The chair cannot be a lot of swirling leaves as in the Louis XV style because our backgrounds are quite the reverse. Things must be in harmony one with another and with us who are living in, around and with these things. He must reason all this out. If he is building a chair, he must know not only the room in which it is to be used but who is going to sit in it as well. As mentioned before, background obviously influences line and color. Certain colors are appropriate for women and others for men; certain ones for living rooms and others for bedrooms. Lastly this involves a knowledge of the natural laws of color and design. With thought and rationalism, continually remembering the practicability of the thing being built, the result is natural beauty. There can be nothing else.

Beauty in industrial art, then, is a matter of frankness, of not being afraid wood is wood, not staining it to look like walnut when it is naturally another kind; not in painting metal when it has its own beautiful color and texture. Being frank and using only the necessary with much thinking. Simplicity without thought brings monotony and obviousness, not interest. It is only by thought that man grows. It is his only special privilege. All of this is a matter of being natural; of going along in that straight line, not being erratic or emotional. When we become that we can't think.

You then, should teach industrial art from a new angle. Certainly this is the most individual-developing and democratic movement we have had in art. Each one has a perfect right to stand on his own feet and in thought to say what he believes to be right and true. Regard your students who are studying for the combining of the mechanical and useful with the beautiful, dropping aside all that is artificial and going after only the real and practical, changing the environment, making things more convenient, simpler, so that their lives will be just that.

Our Common Ground

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THE great problem that confronts all education today is that of its adjustment to modern life. This is our common ground. Let us consider this subject in three divisions:

1. The material to adjust.
2. The skill of the adjuster.
3. The value of the adjustment.

The material to adjust is the subject matter which must be brought into proper relation for use in its daily surroundings. Life is continually advancing. The order of things is constantly changing, but in spite of the newness of modern trends in art and education, we find we can still claim fundamental truths as our foundation, truths which need only to be adjusted in terms of modern life to new situations. These unchanging fundamentals which govern all the arts may be considered as our magic key which unlocks for us the door of beauty and appreciation.

The question of the selection of subject matter in the average overcrowded school program becomes a serious one. What subjects are of most practical value and have the most lasting influence for the individual? Should the material be presented in the form of a series of abstract problems to be laid away in the family treasure

chest or should it be selected to develop appreciation and meet life's needs in forming judgments and analyzing new situations?

Having the proper material to adjust, let us next consider the adjuster. In this case the adjuster may be the teacher who manipulates the key with varying degrees of skill. "Preparedness in the field of art" should be her slogan. Training in appreciation, training in technique and ability to produce are necessary requisites. A practical art background is not learned from books or gained over night, but is the result of constant observation and study.

This art background of technical training and appreciation is most essential to meet the daily demands of the art teacher in order to give just criticisms, to aid in forming judgments and to analyze situations. The effects of this training will show in the attitude of her students as well as in the type of classroom results.

Academic training cultivates a breadth of view and has its effect in increased creative expression. A knowledge of academic subjects enlarges one's capacity for service by intelligent cooperation with other school subjects.

To bring about a practical balance of technical and academic training is our ideal. The skill of the adjuster in manipulating the "key" will depend on both technical and academic training.

The value of the adjustments will be determined by the results and the results will reflect the standards which were set forth by the adjuster. What shall these standards be, creative or imitative—of high quality or low value?

In adjusting art problems to the needs of life today, let us consider some actual classroom work in the subject of creative expression in figure drawing. The spirit of life today is movement and progress. In order to express this spirit and to create a harmonious atmosphere for its expression, music was introduced into the art room. The rhythmic composition of "The Marche Slav" by Tschaikowsky was one of the selections chosen for the musical setting and the work on the following slides show the results. Probably the most outstanding value was the originality developed in creative expression. Each student thought, felt and expressed the ideas that appealed to him most. These compositions were executed directly on the linoleum block and give a graphic illustration of this musical composition.

SET OF SLIDES ON FIGURE COMPOSITION

The single figure was also developed by this method for rhythm and movement. The musical compositions of Schubert's "Serenade" and "The Rosary" were played.

SLIDES OF SINGLE FIGURES

Figure drawing may be presented from various standpoints and has probably the greatest use of any one subject for art expression.

Its commercial value in the fields of illustration, decorative arts and advertising are to be seen every day. For many modern uses an abstract interpretation is needed, so we will look at a series of slides for this purpose.

SET OF SLIDES OF ABSTRACT FIGURE DRAWINGS

Art, Home Economics, and Modernism

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PERHAPS the most important thing in meeting any body of people for conversation is that we be prepared to think alike as nearly as possible, while we talk together. It happens that all men and women, if they are "all there," have their minds occupied with some leading thought and I have noticed that unless I try to listen to people who have something to say, and put aside what I have in my mind, that I do not get anything out of it. We are assembled together as friends and I am not delivering a speech but talking as friend to friend. On such an occasion, if you are going to get anything, you will have to put from your minds what you are thinking of and listen to what I am thinking, whether you believe it or not.

First, this thing called Modernism needs a little clearing up. Let us see as intelligent people what the great world movements are that give energy to this new manifestation. What is it in this thing called modernism that appeals to the world?

First, the world is possessed, if it ever were possessed, with the idea of getting money. The great motivating idea of the time is getting money. Where can I turn my services into five dollars that I may spend that five dollars as foolishly as I can? The idea back of it is economic. I can remember when large numbers of people would sit and listen to art for art's sake. Now when you say art for art's sake, they say: "For whose sake?" They don't know what it is all about. The only thing to do is to put everything in terms of dollars. A great economic rivalry exists today between individuals, between firms, between nations.

Second, we are living in a scientific age. When Chippendale made a chair he sat down in it and tried it for weeks and weeks until its proportions were right according to his ideas. It was a Chippendale chair. Others made individual chairs and these chairs were an achievement in the life of each maker. Now someone takes a piece of a chair

from one period, another piece from another period, forgetting the scale. He does not change the detail, the size or the shape before he puts it in with something else. Then he sends it to a factory, and so one man has made a design and two hundred men make a chair. One man puts a piece of wood in a machine. Out comes a leg. The next man puts another piece of wood in, and out comes a back. Then many, many men straighten them out. The workmen don't have to have brains. Legs in this pile, backs in another pile, and after awhile they are glued together into scientifically made chairs. There was one man concerned in making the model for the chair, fifty robots in putting together duplicates of it and one hundred fifty thousand robots to buy them. From this you see the development of the chair. The method has changed somewhat in one hundred fifty years as we are motivated in this day and generation from a scientific, machine-made viewpoint.

In Paris some one designs a beautiful dress. It happens that the person who wears it belongs to the dress. Just a little while ago I heard a man say the only difference between a waiter and a gentleman in evening clothes is that the waiters wears the clothes naturally. Clothes are for the individual. In Paris a dress is designed and then brought to New York, where it is made up by the ten thousand, the bust measure only being changed, and sometimes the hips, if they don't forget to do it. It is the same for thirty-four as for twenty-six and by the time some one that hasn't any shape comes along the art of the thing is gone. It is alarming what we are up against in this modern movement if we are going to do anything for art.

The craze is for machine-made things which are scientifically done, even though the term may not be used. People no longer think in terms of religion. Science has the floor.

The third influence that is changing things is the triumph of the idea of amusement over common-sense. We used to think that pleasure and amusement were the same thing. They are not. Some people have to find in amusement at least some element of common-sense, but the world has gone amusement mad. Isn't it alarming what people go to see, pay their money to see, and call amusement? The pleasure one may get out of anything is in proportion to what he puts into it.

Fourth, things are being so standardized. The idea of mass production is so firmly fixed, mechanically and socially, that it is almost impossible for those who have taste or original ideas to express those qualities. You think you have an original hat. There is a sale of hats at four seventy-four marked down to eighty-nine cents. And there is your hat reproduced indefinitely. It is so with everything we wear. Unless the individual teacher, concerned with art matters, can change the point of view the next generation won't know whether it is wearing a slop pail or a hat on its head, because things will be cut by

hundreds of tons. That is why I am being so emphatic about the motivating cause.

Now a word about Home Economics because there are in this room those who teach art and those who teach Home Economics, involving two different realms of thought.

Friends, home economics has got a strangle-hold on the world. You have got a strangle-hold on life. Art teachers lost their hold on life when they stated they were art teachers. If a person isn't an art teacher, then she is no teacher, because she has neglected one side of life. Now in home economics you teach about food, about calories, about vitamines. Those things are in the public mind. I can prove to you that you cannot eat sausages—how I love them—show you why, and invent in you a stomachache while I talk. Now the point of that is we acknowledge our appetites for food and drink. I watch in the dining room. I cannot tell the home economics teachers from the art teachers when they eat, but it does make some difference how food is prepared. I would rather have the calories go wrong a little than be served in a room like a pig pen. It makes some difference how the food looks and what the environment is.

Somebody asked me the other morning why home economics is so much more popular than art. It is because you stick to that word. Let us say no more about it. Get away from the idea that art is unobtainable by the ordinary individual and sets a person apart from the world. In that way Home Economics teachers and Art teachers can work together.

After food—I will omit drink—comes shelter. Shelter means home in the Home Economics department: in the Art department it means wholesale decorations. They don't know what decoration is. I will give you an illustration, a true one. One of the times I spoke in the past year was before twelve or fifteen hundred young women in a woman's college. When the girls filed in, the Seniors in the front—(and the funny part about it was, that the dresses worn by the Seniors in the Home Economics class were made by themselves) I saw a very pretty girl. I had seen this pretty girl coming through the hall and noticed that she had on a very dark blue serge dress with some figures on it in light gray—a spider and a fly. These were spotted all over the dress. I said: "My dear, who made the dress?" "I did." "Did you design it?" "Yes." "Who decorated it?" "We did it in the Art Department." "Whose idea is the design?" "My own." "Whose idea the spotting of the design?" "That is mine."

The subject was "Decoration, Appropriate and Inappropriate." I asked this girl: "Would you mind coming up on the platform?" She came right up, sweet and lovely, and then I said: "I don't have to explain what is wrong and what is right in these two departments since this decoration exists to emphasize particular spots for particular

reasons. You don't put on decorations for a reason. You put them *anywhere,* not *somewhere* for a reason." I turned to this pretty girl and said: "A dress made in these departments, decorated in these departments, spotted with a design not in harmony with the material or the girl and put on to call particular attention for particular reasons." I asked her to turn around, and they got it. Now if that one idea of decoration could sink into the mind of every person, pretty soon you wouldn't have things like that and worse, happen in clothes or in the house, for decoration would exist for a reason, not for a whim. Put a blue serge dress on a pretty girl if it is simple enough. If that thought can be made clear then something can be done, but there is at present no such thing apparent as the relation of these two departments, so that the one plays into the hands of the other.

Now clothes and shelter and food, all three are necessities, but how much time do you think is given in any first class Home Economics department to the history of clothes? Of course it is not necessary to know how the primitives made clothes. They got through the forest and I am very glad of it, but it seems to be very necessary to have a history of clothes. Wouldn't it be a good idea to know about wearing the proper dress to breakfast and whether or not to wear a wedding dress to a tea in the afternoon? A course when to wear and where to buy them, that would be the history of clothing. In this generation in the Home Economics department, we have got to do something that will make young women think of the suitability of things in clothes, and learn to recognize it and we shall not know until we have taken the history of women's clothes for three hundred years back.

You see, in the Home Economics department we are thinking of every woman, from the farmer's wife in the sun of Kansas or Alabama to the bootlegger's wife in Chicago, or the banker's wife in New York, or the lady who has just gained right of residence abroad. You see there are all these different kinds of people we are thinking about when we talk dress or when we talk home, but the fundamental is the same for Mrs. X whose husband has all the money in the world to the woman in Kansas who never went off the farm until she was married and went to another farm. Those are two extremes but the principle is the same—suitability, the best thing for the money and the right place to wear it. Even yet Mrs. X can be taught when and where to wear things. The woman in Kansas can be taught what are the most suitable things under the circumstances. The object is to spend our money to the greatest advantage and in so doing not to become a public nuisance because of our looks.

In speaking of Home Economics, I shall take the University of Texas by way of illustration because that is so far away. I know a

wonderful woman for a position, but they say the teacher must have a degree. They want a teacher to take a course for two years for so-called Interior Decoration. Interior decoration is a mistake unless you know what the interior is and what you are decorating and unless you know what principles control the decorating, and those who have degrees don't know anything about the subject, and those who know the subject haven't any time to get degrees. There is the trade against you. There is public knowledge against you. There is tradition gripping it. Now if there was a college that dared to take any one that didn't have a degree, it could get a trained teacher who could work with an architect and could take a house over and decide about corners. That is what an interior decorator must do today. The time has gone by when divorcees made their employment interior decoration.

Twenty-five years ago we had the honor to give the first course in Interior Decoration in America. The class was composed of fifteen men, seven of whom came from W. J. Sloan's store. They said if they didn't take the course they would lose their jobs, so we had fifteen people studying the course we gave then. Now there are sixteen art schools in America and one hundred twenty-seven colleges giving some kind of a course pertaining to the interior of a house. This is hurting you because you are doing it educationally and they are doing it commercially. In order to succeed it is a scholarly knowledge that is essential.

The first thing to teach in the decoration of any house is what the room is for. How many people go out and say: "Isn't that a wonderful chest? Here is a piece. They are having a sale of these." They may have only a fourteen by twelve apartment but they have a floor lamp. They never think of the room.

I say: "What is your room, Madam?" "It is a dining room." Then I say: "Madam, what do you do there?" And she answers: "Eat." "Oh, you are going to eat! Aren't you going to put color in this room and aren't you going to put decorations that won't turn your stomach when you try to eat?" Isn't there a type of brown that you see in dining rooms that turns your stomach? I work out this room with the idea of what it is for.

Now I do the same thing for the living room. "Our living room." "Who is 'us'?" "My husband, two children and my husband's mother." "Your husband's mother has one idea and the children have a different idea." I am trying to make that room a unit that mother and father, grandmother and children can endure and not be worse than they are. I have to account for everybody.

Bedroom. "I want to do over my bedroom." "Whose bedroom? Do you sleep there?" "No, it is a guest room." "That is a different proposition. I have your number but not the number of all your

guests." A guest room must be an impersonal room. Half the people don't know where to put the bed. I just drove across the country from New York for six days. They always put the bed where there is the greatest draft and the mirror where the sun hits you in the eyes. They don't have any brains. They don't think of the function of the thing when they place the bed. They have spotted paper, spotted curtains. You cannot ride back of some persons in the street-cars without counting the number of dots on their dresses. These abstractions will prevent sleep in a room. If it has too dark pictures it is impossible to get the full benefit from a bedroom. A course that does not teach that, does not amount to anything. It doesn't make any difference how many drawings are made, if they have not got that, they have not the fundamentals. Let the individual room speak its use. Let each individual piece speak its use. People have forgotten what a chest is for; they have forgotten what a bookcase is like. They did the same thing in the Renaissance. They have a collection of carved chests by the dozen in the Louvre. Let us stand against that for the individual piece.

Another thing I am very much interested in at the present time is the kitchen. The number of steps that mother takes. You know, one thousand seven hundred seventy-seven times to the sink, then just as many to the kitchen table. It is perfectly amazing how much walking she does. The man who designs a kitchen where every part of it functions should have a halo. The economics of walking in the kitchen should be considered. There should be a system of economics for every phase of expression in the home, and this is an art. Art triumphs when it is able to achieve the best results in this line.

Begin your interior decoration with the walls. Don't begin with the furniture. Don't begin with the lamp shade. Don't begin with the pictures to be hung, even if "the owner painted them herself and never took a lesson." Let us begin with the background of the room. Must you have wall paper? If you can wield a paint brush, it is much better, if you know what paint to use. What material is going on the wall? Then we will decide what color. We could talk the whole morning about that because some people will say: "I have my own idea." So if you can convince people that since you are an expert, perhaps your idea is worth thinking about, you are a star salesman, as well as a Home Economics teacher, because you have put your idea across. After the background comes the ceiling and I am trying to have that related. The next thing is the drapery. Don't let them say drapes. It is the same as saying gents. I wouldn't put in a piece of furniture until all this is decided. If there are pieces that are not desirable and I can not get rid of them, I would place them where they would not show. There is a class of people to whom you will have to say: "I went through the same thing myself.

My husband was married before. You don't know how I suffered." She loves it, but she says right away: "Get it out if you can, but if you can't we will have to put it where it won't show."

A room has to be a unit when it is done and the right way to do is to plan a room on its axis. If every room had to have a chimney in the center the decoration would be simple. I would have a fireplace, have something to go by. Now if I could do the same thing horizontally in the center, it would be the next best thing. After I have established this, if there is a chimney-piece, then you build around it, don't you? (showed arrangement of room), until you have a family group. Grouping of furnishings is the important thing in a room to make for homeliness and taste.

Pictures. Isn't it terrible what happens to pictures? I remember when I began to study, the proudest moment of my life was—(no! the proudest moment was when the French Government gave me membership in the Legion of Honor)—when I got a C on my drawing of a cast of the ear of Socrates. The art I got out of that ear is amazing, and yet that is an experience in life that is never to be forgotten, because I saw in it myself, and that in a youth is never forgotten. We have to look out about our pictures. Adjust the picture first, not the frame; adjust the individual first, not the clothes. The emphasis is in the wrong place.

Do you know enough about lamp shades to stop right now? Movie extras, beaded, lace trimmings, groups of roses and the man of the house sitting by that with a clay pipe. Lamp shades should be plain, they should be very plain, and many times they should be opaque. Precious few people can afford to have light coming through. Lamp shades should be so made as not to call attention to them but to divert it.

Friends, Home Economics has the floor in education. You can make it educational, you can make it social if you arise to the occasion, but the public knows more about it than you do. The clerk in the store knows more about what is to go on to your back. It is surprising how the public has grown and the trade has stood still.

The only hope in the world lies with the art teachers who have taste; with the teachers of home economics, for they have a lot more force. The only thing we can do is to cooperate. I tell you, friends, that all the teaching in the world is terribly small when you think what the environment of one hundred and twenty million is. How is the next generation going to pick and choose from what is going on around it? It is the professional, earnest, serious attitude toward the creation of the environment that we require and it must be done largely by the people in the very position you are holding throughout the country. Thank you very much.

A Symposium of Some Recent Findings in Pupil Adjustment and Guidance

JOHN F. FRIESE
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IT is the purpose of this discussion to lay before you brief and significant extracts from recent studies dealing with evaluations of programs of vocational guidance or pupil adjustment. Many workers in the field of vocational guidance, including as they naturally do, a large proportion of those teachers who are in the field of industrial arts and vocational education, feel that before vocational and educational guidance is extended much farther, an evaluation should be made of some of the practices and procedures in order that future extensions of the work may be based upon known facts. Promiscuous introduction of any of the various forms of guidance without a factual background can only lead to some of the unfavorable conditions in which certain school subjects which enjoyed rather sudden popularity later found themselves.

I propose to lay before you three types of evaluations—the first having to do with an individual community, the second with statewide investigations, and the third with surveys which are national in extent.

PART I

AN EVALUATION OF A CITY GUIDANCE PROGRAM[1]

A number of years ago I was the one in charge of vocational and educational guidance in the public schools at St. Cloud, Minnesota.

1 Friese, John F., A Pupil-Graduate Evaluation of the Guidance Services of the St. Cloud Public Schools, with Special Emphasis upon the Extent and Permanency of Occupational Selection.

POHLMEYER, INC.
PASSAIC, NEW JERSEY
MANUFACTURERS OF
Plastilin
Panpeco Oil Colors—Water Colors—Tempera Colors
ALSO
LION WATERPROOF DRAWING INKS
White and Twenty-one Colors

The secondary schools consisted of seventh and eighth grade departmentalized junior school and a four-year technical high school. In order to visualize the study, it is necessary to indicate the vocational guidance services which were organized.

Eighth grade (second semester)

"Occupations" class (a social science), including definite provisions for educational or curriculum guidance toward the senior high school.

Ninth and tenth grades (first semesters)

1. Selection by the students of a total of eighteen of forty-five freshman-sophomore "Occupations Lectures," given by approximately a dozen men teachers and a dozen women teachers. The Occupations Lectures (informal discussions) were given by those who had had experience in, contact with, or who had studied about, occupations.
2. Counseling with students who had not come through the local junior high school.
3. Exploratory courses in industrial arts for boys.

Twelfth grade

1. Student selection of twelve senior Occupations Lectures, several of which were to compose a group of related occupations.
2. Individual counseling with seniors, supplemented at times by "outside" conferences with interested local individuals.

This survey-evaluation was based upon three contacts with students at the following periods:

1. At the time of individual counseling with seniors (April-May, 1927).
2. At graduation (June, 1927).
3. Two and one-half years after graduation (November-December, 1929).

At the time of senior counseling in the second semester each student revealed his plans for his future occupational life, the summaries of which are contained in Tables I, II, and III following:

TABLE I

DEGREES OF OCCUPATIONAL SELECTION OF 139 SENIORS AT TIME OF INDIVIDUAL COUNSELING (APRIL-MAY, 1927)

	No.	Percent
Definite selection of one occupation or educational preparation for it	126	91
Decision after completion of junior college	8	6
Choice between two occupations	5	3
Wholly undecided	0	0
	139	100

TABLE II

SPECIFIC OCCUPATIONAL SELECTIONS OF 139 SENIORS AT TIME OF INDIVIDUAL COUNSELING (APRIL-MAY, 1927)

	No.	Percent
Professions	15	10 plus
(Medicine, law, engineering, journalism, library)		
Nursing	16	11.5
Teaching	42	30
(Grade, academic, industrial arts, music, physical)		
Commercial	21	15
(Stenography, typewriting, bookkeeping)		
Commercial art	5	4
Trades (skilled)	13	9 plus
Agriculture	4	3
Business and salesmanship (boys)	8	6
Selection after junior college	8	6
(Probably professional or teaching)		
Choice between one or two occupations	5	4
	100	100

TABLE III

CLASSIFICATION OF HIGHER TRAINING INSTITUTIONS SELECTED BY 114 SENIORS AT TIME OF INDIVIDUAL COUNSELING (APRIL-MAY, 1927)

	No.	Percent
Colleges or universities	30	26
Teachers' College (2, 3, 4 yr.)	37	33
Business colleges	14	12
Hospitals	16	14
Miscellaneous special schools	17	15
	100	100

EVALUATIONS OF GUIDANCE SERVICES BY HIGH SCHOOL GRADUATES 2½ YEARS AFTER GRADUATION

It was thought that some indication of the permanency of occupational choices could be secured if it could be discovered what the individual pupils were doing occupationally, or preparing to do, two and one-half years following their graduation from the high school. At the end of this length of time all who intended to pursue professional training in a university would have made their selections. A questionnaire was, therefore, sent to all of the graduates of the class of 1927, on which they were requested to indicate what they were working at or what occupation they were preparing themselves

for. There were also questions which it was thought would be a further measure and check of their estimate of the guidance services offered. The outstanding results of the latter part of the subsequent checking are contained in Tables IV and V following:

TABLE IV

EVALUATIONS (2½ YEARS AFTER GRADUATION) OF THE EDUCATIONAL AND VOCATIONAL GUIDANCE WORTH OF THE EIGHTH GRADE CLASS IN "OCCUPATIONS", BY 23 TECHNICAL HIGH SCHOOL GRADUATES OF 1927

Character of Assistance	Percentages			Positive Assistance
	Much	Some	None	
Assisted in selection of senior high school subjects	61.	30.5	8.5	21 students or 91.5% of those reporting were assisted "much" or "some" in *educational* guidance.
Assisted in selection of an occupation.....	17.4	43.5	39.1	14 students or 60.9% of those reporting were assisted "much" or "some" in *vocational* selection.

TABLE V

COMPARISON OF THE VALUES ATTACHED TO THE GUIDANCE SERVICES IN THE TECHNICAL HIGH SCHOOL BY 117 TO 124 SENIOR CLASS MEMBERS AT TIME OF GRADUATION, AND AGAIN BY 54 GRADUATES 2½ YEARS LATER

Guidance Services and Assistance Given	Of 117-124 Voting "Yes" at Graduation	Of 54 Voting "Yes" After Graduation
1. Occupations Lectures assisted in selection of a future occupation.....	54%	70.4%
2. Individual counseling assisted in selection of a future occupation.....	50.8%	59.3%
3. Occupations Lectures assisted in selection of advanced subjects and courses in high school, college or other school..	47.8%	87.4%

It is interesting and perhaps significant to note that from a perspective of two and one-half years, greater guidance values were voted to all three types of guidance services.

The ultimate criterian for judging the effectiveness of vocational and educational guidance is the permanency of the occupational choice. This is indicative of several conditions. With this outcome in mind the attempt was made to discover the degree of permanence exhibited over a period of two and one-half years. While it was possible to secure only 54 cases out of 139, the data available is worthy of consideration, even though they cannot be set up as valid for the entire class. The actual time of selection of an occupation was originally secured through a brief questionnaire filled in by the students at graduation. This data is recorded in Table VI, and it indicates the continually increasing numbers who stated that they had determined upon an occupation at succeeding points during the guidance program.

TABLE VI

STATEMENTS BY FROM 126 TO 129 SENIORS OF THE TECHNICAL HIGH SCHOOL (JUNE, 1927) AT THE TIME WHEN OCCUPATIONAL SELECTION WAS MADE

	Selected		Not Selected		Points in the Vocational Guidance Program
Time of Selection	No.	%	No.	%	
Occupations selected prior to attendance at senior Occupations Lectures (2nd. Sem.)	72	55.8	57	44.2	55.8% had selected occupation. Jr. H. S. Occupations Class, freshman - sophomore Lectures, and some counseling should receive considerable credit for this.
Occupation selected prior to senior individual counseling (April-May)	89	70.6	37	29.3	Occupational selection increased to 70.6% of pupils reporting. Considerable of the 14.8% increase should be credited to senior Lectures.
Occupation selected at graduation (June 1)	111	86	18	14	Occupational selection increased to 86% of pupils reporting. A major part of the additional 15.4% increase might be credited to counseling.

PERMANENCE OF OCCUPATIONAL CHOICE AS EVIDENCED 2½ YEARS AFTER GRADUATION

The degree of permanence of occupational choice is indicated by the replies of 54 students 2½ years after graduation. This information is contained in Table VII. All but one of the eleven who had definitely changed their occupations indicated valid reasons for their changes.

TABLE VII

FOLLOW-UP CHECKING (2½ YEARS AFTER GRADUATION—NOVEMBER, 1929) OF THE PERMANENCE OF OCCUPATIONAL CHOICES OF 54 OF 139 MEMBERS OF THE 1927 GRADUATING CLASS OF TECHNICAL HIGH SCHOOL

Permanence of Occupational Selection	No.	% of 54 Reporting
1. Same occupation as named during counseling period (Actually working at, preparing for, or still planning to pursue)	34	63.
2. One of two occupations most interested in during counseling period	4	7.5
3. An occupation closely related to choice during counseling period	3	5.5
4. An entirely different occupation	11	20.
5. Occupation selected (Undecided in 1927)	2	4.
	54	100.

PART II

AN EVALUATION OF GUIDANCE ACTIVITIES IN A STATE

By the University of Wisconsin

The first of these two studies reported upon is one which is centered in the Bureau of Guidance and Records at the University of Wisconsin.[1] Certain definite objectives were set up to give clarity to the program and procedure to be followed by this Bureau. The six objectives, together with selected extracts from a report from each of them, are as follows:

"I. TO COOPERATE WITH SECONDARY SCHOOLS AND THE COLLEGES OF THE STATE IN AN ANALYSIS OF NATIVE APTITUDES AND INTERESTS OF HIGH SCHOOL STUDENTS.

A. *The committee on cooperation.*

A committee representing the High School Principal's Association, the City Superintendents' Association, the Private Colleges, the State Teachers Colleges and the University has been created to study the relation between the institutions of higher learning and the secondary schools of the state and to promote a program designed to solve such problems as investigation indicated as pressing.

1 Holt, F. O., Report Indicating Objectives Set Up by the Registrar's Office and the Bureau of Guidance and Records, and Progress toward Accomplishment of these Objectives

B. *The admissions blanks.*

The committee made a very complete study of the admissions blanks of a great number of colleges and formulated one which all agreed to use. The blank is designed to supply such information about an individual student as will enable a college to proceed intelligently with a counseling program. In outline the blank accomplishes the following:

1. The student gives such personal information concerning the likes, dislikes, experiences, ambitions.
2. The principal or a teacher rates the student as to special traits and abilities.
3. A complete record of secondary school achievement is included.
4. The University has made use of the information contained in the blank as a basis for counseling during Freshman Period and some of the deans and advisers have used the blanks for counseling.
5. The registrar's office and the Bureau of Guidance and Records use the blanks continually in conferring with students.
6. As an effect of the blank it is interesting to know that a considerable number of school systems have definitely worked on a cumulative record which shall contain a life history of the significant facts concerning every pupil.

C. *The testing program of 1928-29 and of 1929-30*

Fifteen colleges cooperated in 1928-29 and sixteen in 1929-30 in a testing program to determine the college aptitude of the senior in the high schools of Wisconsin.

1. In 1928-29 fifteen colleges cooperated in bearing the entire expense of the program, the cost was approximately $5,000.
2. In that year 16,600 seniors in 433 secondary schools were tested and scored for college aptitude.
3. A complete report was made to every high school indicating the rating of each of its seniors in college ability.
4. Each college was supplied with a list of the students who indicated the probability of entering that college and was given his rating as a college possibility.
5. It was discovered that, contrary to the evidence in other states there is high selectivity of high school graduates who enter Wisconsin colleges.
6. The data showed, however, that about 1,500 high school seniors planned on entering college who were dubious risks while about the same number of seniors with very high scholastic ability had no intention of furthering their education.

"II. TO ENCOURAGE HIGH SCHOOL GRADUATES TO PROCEED FROM HIGH SCHOOL INTO THAT AC-

TIVITY IN WHICH THERE SEEMS TO BE GREATEST PROMISE OF SUCCESS AND SATISFACTION.

A. *The University sends representative upon invitation.*

1. The representative presents the problem, not of the University but of all the colleges to the entire student body and explains the predictive significance of high school achievement with reference to college requirement and success.

"III. TO OFFER TO PARENTS OF HIGH SCHOOL STUDENTS SUCH SERVICES AS MAY BE HELPFUL IN INTERPRETING UNIVERSITY OPPORTUNITIES, REQUIREMENTS AND POSSIBILITIES.

A. *University representative meets, as he visits the high school in a community, with parents of high school students.*

"IV. TO MAINTAIN A CLOSER RELATION WITH SECONDARY SCHOOLS FROM WHICH STUDENTS ENTER THE UNIVERSITY AND TO PROMOTE THE OPPORTUNITY FOR CONTACT WITH THE PARENT OF SUCH STUDENTS.

A. *The registrar's office and its records.*

1. Records of freshmen in the College of Letters and Science who at the end of the first six weeks of the first semester find themselves in scholastic difficulty are reported by the office of the Junior Dean and are transferred to high school principals and parents who are asked for suggestions and comments which may be used in assisting such students.
2. Records of freshmen in Letters and Science who have made significant grades at the mid-semester are reported to the high schools with a view to promoting high scholastic morals in the secondary school.
3. Reports of the scholastic record of all freshmen are made to the secondary schools at the end of each semester. These records make it possible for the schools to analyze, in many instances, the effectiveness of the preparations afforded their graduates.
4. Such reports as secondary school principals desire concerning their graduates who are in attendance at the University are made available upon request.

C. *Summer advisory service.*

1. The registrar's office and the Bureau of Guidance provide opportunities for visitors who act upon this (the president's) invitation to confer on entrance requirements, university courses, requirements and opportunities and to meet officials in special fields for detailed and technical counseling.

2. During the summer of 1928 over 450 students and parents made such visits to the University and during the summer of 1929 the number who acted upon the invitation was well over 1,000.

"V. TO PROMOTE AND INCREASE THE POSSIBILITIES FOR HAPPINESS AND SUCCESS OF ALL STUDENTS AFTER MATRICULATION.

A. *Freshman Period.*

1. To make the sensitive and delicate transition from high school to University as natural and easy as possible. Freshman have almost unanimously reported that they find the Period of real help.
2. To provide that freshmen shall secure their first impressions of the University from contacts with responsible members of the faculty. One hundred twenty-five members of the faculty have, each year, volunteered to return a week early to make these contacts possible for incoming freshmen.
3. To correlate choices of colleges and courses with the excellent information supplied through the admission blank, counselors make a preliminary analysis of each freshman before a private conference is held. Each freshman has a counselor who teaches in the special college and course in which the student indicates primary interest.

B. The testing program and counseling in the University.

1. To develop a life career motive.

Additional to the college aptitude test all freshmen men were, during Freshman Period of 1929, given an opportunity to take a vocational interest test. This test, analyzed and scored by the Bureau of Guidance, indicates the probable vocational interest of a student, serves as a basis, with the information of the admissions blank for counseling by the Bureau of Guidance and in addition serves to encourage freshmen to give consideration to a very definite career motive during their college course.

2. A program of individual conferences.

The Bureau of Guidance has experimented in counseling a group of freshmen men upon the basis of the evidence of the vocational interest test together with the additional information available concerning the student. The experiment has proven so significant that during the second semester a group of picked members of the faculty will be asked to hold individual conferences with all freshmen men who took the vocational interest test. The record of achievement of the first semester will be available. The counselors who participate will pool their reactions and out of the venture there will undoubtedly come suggestions for a continued counseling program.

"VI. TO TAKE THE INITIAL STEP TOWARD A PROGRAM WHICH SHALL EVENTUATE IN A CONTINUOUS EDUCATIONAL AUDIT OF THE UNIVERSITY.

A. *The state-wide testing program and the scholastic aptitude of University freshmen.*

1. The problem involved.

a. The quality of student material which enters the University should be known, as all educational policy and procedure is affected by the type of student which enters. The question of first and second year standards of required and elective courses, the whole problem of student mortality is tied up with whatever the facts may indicate.

2. The testing program of 1928-29.

a. For the University of Wisconsin the following significant facts were discovered.

1. That 45.71% of our freshmen are from the strongest twenty-five per cent of high school graduates. 25.17% are from the second twenty-five per cent, 17.5% from third twenty-five per cent and but 11.51% from the lower twenty-five per cent of high school graduates. That 24.8% of our freshmen are from the upper 10% of high school graduates, while 3.34% are from the low 19% of high school graduates."

The Bureau of Guidance and Records has compiled a summary of the reactions of 79 freshmen who came to it for assistance following the Freshman Period. These reactions are summarized in the following list. They report the reactions of freshmen to the Freshman Period and the testing program and the counseling service of the University.

Reactions of 79 Freshmen	Yes	No	No Report
Assistance of counselors and student assistants	67	12	
Learning how to study, etc	61	18	
Acquaintance with campus facilities and related services	57	22	
Learning library and related possibilities	53	24	
Experience with tests, information services, and regulations	39	14	26
Relationships with campus and outside social agencies	34	25	20
Assistance in securing employment, etc	22	17	40

OCCUPATIONAL INFORMATION BULLETINS FOR HIGH SCHOOL STUDENTS

The Bureau of Guidance and Records senses that one of its most important functions is that of acquainting high school graduates with the occupational possibilities and requirements in those fields which are represented by professional training in the various divisions of the University. With this end in view, work has been begun on a number of occupational bulletins which are to be made available for high school students. The manuscript for one of these has just been completed, that for journalism. Probably the most significant feature of this bulletin is the form rather than the content. It is not merely a summary of occupational possibilities, requirements, standards, and training; but it constitutes a sort of test by which an interested individual can rate himself for a given occupation. Information is given, it is true, but questions are also raised which challenge the student to make a self-analysis with the view of his determining for himself something of the likelihood for his success in a given occupation. There are a number of questions on which he can vote "Yes" or "No" in connection with his interests, and others regarding the kind of people he likes. There are other sections where a requirement is listed followed by the reason for that requirement, and the student may rate himself, 1, 2, 3, 4, or 5 on these requirements. There are also questions which may be answered "Yes" or "No" in regard to studies he finds interesting and other questions having to do with social relations. The above questions, together with information given about the different kinds of work available in the various types of newspapers, magazines, and books; and statements regarding the general qualifications of journalists are carefully outlined. The schools where journalists may be trained are listed, and the result of a survey of what graduates of the University of Wisconsin School of Journalism actually do after graduation are interestingly set forth. The monitary rewards are presented, using a study conducted in this field. The bulletin concludes with instructions on how the student may use those parts which are in question form, for self-evaluation, and how he may rate himself. The form of this bulletin has been tried on a number of freshmen, and it has been modified in the light of the reactions of these young people to it.

OCCUPATIONAL BULLETINS BASED ON INVESTIGATION AND MEASUREMENT

Brief indication has already been made, incidentally, of the fact that some of the material in these bulletins is based upon investigations and measurements. As an example, reference is made to the study made by Williams[1] at the University of Wisconsin in 1928. The records of 359 entering freshmen in the College of Engineering,

University of Wisconsin, in 1923 were used as a basis for this study. Contrary to the belief of some teachers of industrial arts and vocational education, students who achieve marked success in manual arts, taken as a group, are the least successful in engineering work in a university.

Weighted averages in the various groups of high school subjects were correlated with grade points earned per semester. The co-efficients obtained were as follows:

Manual Arts	.285	‡	.047
Languages	.383	‡	.042
Science	.425	‡	.031
Social Science	.433	‡	.030
English	.426	‡	.031
Miscellaneous Subjects	.448	‡	.030
Mathematics	.517	‡	.028
High School Average	.539	‡	.027

"A study of the correlations found shows that most of them have little significance, the higher and lower values being of greatest value. A study of the correlation of .285 between manual arts and grade points illustrates the manner in which disturbing factors may affect the value of the result in such cases.

"It might be supposed that the co-efficient of .285 shows that the student who takes courses in manual arts in high school has a better chance of success in engineering than the student who takes none of these courses. An analysis of the data, however, shows that the opposite is true. Of the total of 311 cases studied, 176 had manual arts courses in high school and 135 had none. Of the first group 17.6 per cent were graduates as compared with 23 per cent of the latter. In the first group 22.7 were dropped and in the second group 19.2 per cent. An explanation of the superior showing of those who took no shop courses is found in the fact that they averaged 5.1 points above the other group in high school grades. Evidently poor students tend to elect courses in manual arts. Apparently the only advantage in taking shop courses in high school, so far as work in engineering is concerned, is to make the corresponding courses in college a little easier. Even here, however, the advantage is slight, for those with no previous work in manual arts received grades but 1.2 points below the other group. What the coefficient of .285 does show is a slight tendency for those receiving high grades in high school manual arts courses to do better work in engineering, than those who do poorly in high school shop work. The tendency is slight, however, and is considerably less than that possessed by any other group of subjects.

1 Williams, F. A., "High School Grades and Success in Engineering." An unpublished thesis submitted for a masters degree, The University of Wisconsin, 1928.

"Mathematics affords much the best indication of which the student may expect in engineering. An average grade of below 85 indicates a very slender chance of success. Of 62 graduates in the entire group, 40, or 64% had high school mathematics grades of 90 or above. It would seem that student advisers have not realized sufficiently the tremendous handicap of the student who has done poor or mediocre work in high school mathematics. Scores of engineering students are dropped every year. It would seem that many failures could be prevented by a vigorous guidance program."

Reference is made to this study only to indicate the type of material being used as a basis for statements made in these occupational bulletins. Every effort is being made to make the material factual and based upon actual measurement.

A STATE WIDE SURVEY OF VOCATIONAL GUIDANCE SERVICES BY THE AMERICAN LEGION

The committee on Community Service of the American Legion, Wisconsin Department, in conjunction with the Wisconsin Conference of Social Workers is undertaking a study throughout Wisconsin of various social conditions and services available in the communities of the state. This work is being done through the local posts and a number of advisory committees of specialists are assisting. One of the divisions investigated is that of education. Among the various phases of education studied are included the facilities for pupil adjustment and guidance, as follows:

"Pupil Adjustment and Guidance

I. *Plan and Co-operation*

Note: All questions are for the past year.

Ques. 1. Are pupil adjustment and guidance assigned to designated persons in your school? Ans.: Yes No

Ques. 2. Which of the following plans is employed?
- Ques. a. School counselor? Ans.:
- Ques. b. Class adviser? Ans.:
- Ques. c. Guidance committee? Ans.:
- Ques. d. Faculty members? Ans.:
- Ques. e. Vocational co-ordinator? Ans.:
- Ques. f. Placement officer? Ans.:
- Ques. g. Other methods? Ans.:

Ques. 3. Do teachers generally favor this plan? Ans.:
Do they foster the plan? Ans.:

Ques. 4. What outside civic, commercial, and industrial organizations co-operate in aiding plans? Ans.:

Ques. 5. Are parents favorable to the plan? Ans.: Yes No

Ques. 6. Are individual and group services offered by the plan? Ans.:

II. *Pupil Adjustment*

Ques. 7. What percentage of pupils has become adjusted to the school? Ans.:

Ques. 8. What percentage of the pupils who entered school or vocational school has completed a definite program in or outside of school? Ans.:

Ques. 9. What percentage of students is tardy or playing truant? Ans.:

Ques. 10. What percentage of students presented cases of serious discipline or juvenile offense of a school or work character? Ans.:

Ques. 11. What percentage of pupils developed melancholy or inferiority complexes by continued failure? Ans.:

Ques. 12. What percentage of pupils has engaged in voluntary extra-curricular activity? Ans.:

Ques. 13. What percentage of pupils has participated in outside employment? Ans.:

Ques. 14. What percentage of pupils has shown increased thrift as demonstrated by regular savings accounts? Ans.:

III. *Systematic Guidance*

Ques. 15. What percentage of pupils was aided in obtaining adequate, reliable, and significant information about occupations? Ans.:

Ques. 16. What percentage of pupils took part in exploratory activities as an aid in testing their fitness for educational and occupational work? Ans.:

Ques. 17. What percentage of pupils has available pertinent information concerning abilities, aptitudes, temperaments, and personality characteristics? Ans.:

Ques. 18. What percentage of the pupils was assisted in evaluating occupational information and the results of exploratory experiences to help in planning vocational preparations? Ans.:

Ques. 19. What percentage of the pupils was provided vocational training opportunities in preparation for occupations which had been chosen? Ans.:

Ques. 20. What percentage of the pupils seeking placement was aided in obtaining advantageous entry into the occupations chosen? Ans.:

Ques. 21. What percentage of the pupils was helped through employment supervision to progress in occupations or to secure other employment? Ans.:

Ques. 22. What percentage of pupils received general improvement instruction in preparation for home management, citizenship, and leisure time activities? Ans.:"

The ultimate purpose behind this desire on the part of The American Legion is to collect the data and then make it available to all of the Legion posts of the state. This is done with the thought that communities will be stimulated to provide for themselves some of the splendid facilities that other communities have made available to their citizens.

Reference is made to this investigation which is a fact finding one, because it is being done by an organization entirely outside of the field of education. It is significant that other groups are vitally interested in this work and that aid and assistance can frequently be secured from such outside agencies.

PART III

NATIONAL SURVEYS AND EVALUATIONS

From the point of view of the entire nation, two recent studies dealing with the evaluation of vocational guidance services are called to your attention. The first of these is entitled "Evaluating and Improving Guidance Services."[1] This study was made to determine the relative importance of objective outcomes of a guidance program. It is based upon a survey of 398 cases in 259 cities with a population of 20,000 or more. A number of standards were set up for evaluating the success of vocational guidance by school administrators and vocational guidance specialists. The chief results of the investigation are indicated in the table below.

STANDARDS FOR EVALUATING THE SUCCESS OF GUIDANCE

Description of Standards	Rank	Value
Industry should demand more high school pupils	1	
The guidance staff is improving the service through research and experimental problems..	2	
Pupils are entering industry according to some organized plan	3.5	
More pupils are assisted in school adjustment each month	3.5	
More pupils complete a definite high school program	6	

1 Hinderman, Roy A., Department of Education, University of Wisconsin, Reported on in **The Nations Schools**, March, 1930.

Description of Standards	Rank	Value
Fewer students now fail in college after attending from one to three years	6	Major or Indispensable
More pupils are making use of guidance services in planning their careers	6	
Functional adjustment has reduced the number of cases of truancy and tardiness	8	
More high school graduates are earning a grade of B or above in college	9.5	
More pupils are being provided with concrete home and work experiences	9.5	
More cases succeed in the beginning industry (work up in it)	12.5	
The guidance budget is being used for the most important activities	12.5	
More high school pupils who enter college graduate	12.5	
Functional adjustment has reduced the number of serious cases of discipline	12.5	
Guidance records represent latest practice	12.5	
More pupils deposit savings regularly	16	
More pupils are participating in clubs	16	Secondary or Necessary
More cases show regular salary increases	19	
Cases of continued failure are less frequent	19	
More pupils are participating in athletics because of health guidance	19	
More pupils earn grades of 75 to 100	21	
Employee progress reports are received regularly from the employer	22	Minor or Desirable
The general scholastic average for the school is higher	23	
More graduates are satisfied with the completeness of their high school preparation	24	No Value of Unnecessary
Employee progress reports indicate a higher moral standard for more cases	25	

One additional significant outcome of the investigation is the relative importance attached to three types of pupil adjustment, namely, educational, occupational, and social. It was found that the following degrees of importance were attached to these three phases of guidance:

Educational	35.6%
Occupational	32.2%
Social	32.2%

AN EIGHT YEAR STUDY EVALUATING THE EFFECTIVENESS OF GUIDANCE PRACTICES

I will bring this symposium of the measurement of guidance services to a close with extracts from a preliminary report of an eight year investigation which reveals that hit and miss counsel for secondary school pupils is being replaced by direct systematic and expert advice that concerns itself chiefly with the problems of individual self-adjustment. The study in question has been carried on over a period of eight years in 143 cities in 29 states. The results, based on 4,500 boys and girls between the ages of 11 and 17, indicate a growing recognition of the importance of individual differences, interests, aptitudes and capacities, which is gradually leading us to abandon our fruitless counseling *for* rather than *with* individuals. The table below indicates some of the pertinent findings uncovered in this study in connection with seven typical forms of guidance services, namely, occupational information, exploratory experiences, collection of pertinent information, counseling, vocational education, placement, and follow-up.

ACTUAL VOCATIONAL GUIDANCE EMPHASIS

Guidance Activities Provided	Actual No. of Pupils Served (Basis 100)
1. Aiding pupils to obtain adequate, reliable and significant information concerning occupations.....	81
2. Providing exploratory experiences as an aid to pupils in testing their fitness for certain educational and occupational divisions, and as an aid to teachers in discovering pupils' interests and abilities	52
3. Collecting and making available for use pertinent information concerning the abilities, aptitudes, temperaments and personality characteristics of individual pupils	46
4. Assisting individual pupils to evaluate occupational information and the results of exploratory experience in terms of their personal abilities, interests, and characteristics, and helping them to plan their vocational preparation	63
5. Providing vocational education opportunities for pupils to prepare for the occupations they have chosen	71

1 Edgerton, A. H., a preliminary report entitled "Evaluating the Effectiveness of Guidance Practices," was published in **The Nations Schools**, June, 1929.

6. Aiding pupils seeking placement to obtain advantageous entry into the occupations chosen..... 88
7. Helping the pupil through employment supervision to progress in his occupation if it proves suitable or to change if it proves unsatisfactory..... 13

In comment on the findings, Dr. Edgerton, whose place on this program I am attempting to fill, writes as follows:

"He found that as the high school population of America has increased, so wealth has been augmented: 'From 1900 until today, the actual percentage of increase of wealth is 414 per cent. Point by point the two have increased together. Incidentally, our investigation has revealed the fact that guidance activities have increased 368 per cent during this same period.

"1. In the investigation of provisions for exploratory or 'self-finding' experiences in the secondary schools of 143 cities, the following data were revealed: Approximately 20 per cent of required courses would seem to have failed in providing activities of common value to all pupils regardless of future occupation; over 78 per cent of the exploratory or 'self-finding' courses would seem to be devoid of related occupational information; nearly 90 per cent of all courses would seem to have made little or no provision for differences in plans of pupils, including those who intend to leave school early by choice or through necessity and those who probably will go to college. These tendencies would seem to overlook the generally accepted cardinal principles of secondary education, and in addition they limit the possibilities of individual guidance and adjustment.

"2. In the study of the interests of more than 4,500 pupils as revealed by inventories of outside activities involving what they do, observe and read when not required to do so by the school, the following discoveries were made: There was a correlation of over 91 per cent between doing or observing and reading; over 32 per cent of the activities participated in had not been represented by subjects as noted in the courses of study; nearly 20 per cent of the activities listed in the courses of study of the schools from which the pupils were selected would seem to be dead issues insofar as pupils' outside interests and experiences are concerned. Of course, it is not implied that the course of study should include only those experiences in which children have manifested interest by outside participation, although it is suggested that marked discrepancies between out of school interests and required school activities might well be scrutinized and studied.

"It is likewise important that the growing misconception that secondary-school pupils of low intelligence, as measured by mental tests, must be relegated to practical arts and vocational courses should be counteracted. If we fail to stem this tide we are certain to

permit these subjects to continue to become the 'educational waste baskets' for those pupils who are transferred to practical arts and vocational courses because they could not succeed in the so-called academic courses. It will not suffice to criticize present day intelligence tests as narrow and academic in scope.

"Nor is the remedy to be found in deploring the loose use to which the term, 'general intelligence' is often put. We know that there are many kinds of intelligence other than those now measured by standardized tests. The results of Stenquist's study of mechanical ability have shown that at last 20 per cent of the pupils from a typical school who are below average in general abstract intelligence are above average in the kind of ability required in four mechanical tests.

"There is now sufficient evidence to suggest that special ability is as important as that required to score high in the abstract general intelligence tests. For example, a recent study of relationship between the results of intelligence tests, information tests, aptitude tests and rating scales with 734 of the pupils already referred to, convinced me beyond doubt that our task should consist in testing pupils' abilities and interests in various ways and that neither intelligence nor achievement tests are necessarily indicative of special ability."

MECHANICAL TESTS

THEIR RESULTS CONTRADICT INTELLIGENCE TESTS

"Stenquist's study of mechanical ability has shown that at least 20 per cent of the pupils from a typical school who are below average in general abstract intelligence are above the average in his four mechanical tests. It was interesting to note that a number of boys and girls who have pronounced ability in mechanics, poetry, creative art and mathematics were slightly above or below the median intelligence of the group, which merely means that the intelligence test did not measure the special aptitudes of these pupils.

"Unfortunately, there is still a strong tendency to attach a stigma to pupils scoring low in so-called intelligence tests.

"Even for pupils whose abstract intelligence is found, after adequate testing to be low, there is ample opportunity for their special abilities to aid them in serving happy and fruitful lives for which they are often better adapted than are individuals of high abstract intelligence.

"We must recognize that while there are different kinds of ability, which may assist in determining the wisdom of a college education, there is no evidence that the one who has decided to go to college possesses a higher type of ability than the one who is advised to begin preparation for an occupation of secondary grade.

"Between 25 and 35 per cent of the students who are now attending institutions of higher learning in Wisconsin might more profitably spend their time in preparing for other gainful occupations than those represented by university professional schools.

"Approximately 15 per cent of the college and university students who possess both the general intelligence and the special ability to complete the professional courses in law, medicine, teaching, engineering and the like cannot hope to be passably successful in the profession for which the preparation is intended. This lamentable state can be attributed to the personal qualifications that are necessary for success in the vocation, but are not demanded for successful completion of the training."

A WORD OF SUGGESTION IN CONCLUSION

Teachers of industrial arts and industrial vocational education who have as one of their aims that of exploration for guidance, have long been interested in various aspects of the movement for vocational and educational guidance or pupil adjustment. The very nature of their subject has made it almost impossible to escape this interest. Credit is due to many of them for instituting the beginnings of guidance work in school systems. In the field of trades and industries they are usually well qualified to conduct such work. A considerable number of teachers in industrial arts and industrial education have not only inaugurated such work or assisted with it, but have created excellent positions for themselves. In a word, they have created a demand for the thing they have started as a side issue, as it were. Yet, it appears that a great many additional men in our field could do considerable more work in the field of guidance, thereby bettering the positions which they occupy. This is true, I believe, just as much in small communities as in large ones.

Industrial arts instructors and vocational instructors have one important caution to observe, and that is that they remember that their interests lie chiefly in the field of trades and industries, whereas many of the students with whom they come in contact will find their occupational life in other divisions of human activity. It is, therefore, important that if we, as industrial teachers, extend the scope of our guidance work beyond our own field, we adequately prepare ourselves to do this so that the interests of the young people will not suffer as a result of our short sightedness or lack of knowledge.

The Western Arts Association's Investigation of Professional and Scientific Terms

(Excerpts from the report of the special committee. The section voted to have the committee continue the investigation and report again next year.)

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HERBERT H. HUTCHINSON
AND OTHERS

OUTLINE OF THE MINNEAPOLIS REPORT

I. The Association's Investigation of Terms.
II. Examples of Confusion in the use of Professional and Scientific Terms.
III. This is Essentially a Report of Progress.
IV. The Problem of Criteria of Term Selection.
V. Selections from the Master Word List.
 A. Terms Using the Word *"Arts."*
 B. Terms Using the Word *"Industrial."*
 C. Terms Using the Word *"Manual."*
 D. Terms Using the Word *"Practical."*
 E. Terms Using the Word *"Training."*
 F. Terms Using the Word *"Vocational."*
 G. Terms Referring to some type of *"General Shop"* work.
VI. Mr. Hutchinson's Etymological Study of 800 Terms.
VII. Examples from the Analysis of Word Roots.
VIII. Tentative Next Steps in the Investigation.
IX. Recommendations of the Investigation Thus Far.
X. Need for Cooperative Effort and Support.

II. EXAMPLE OF CONFUSION: A STUDY OF DISTINCTIONS

The present Investigation was scarcely begun a year ago, before it was realized that considerable confusion existed concerning the meaning of many other terms besides "Manual Training" and that a study of it alone would give little satisfaction as regards the many, many more terms that were equally problematical. Four distinctly different interpretations were placed on "Manual Training" by the shop teachers of Ohio. (See Section VIII, Part D.) Three of these interpretations were clearly wrong or meaningless.

But the confusion did not cease with a study of professional terms. Preliminary scientific analyses of these terms revealed that shop teachers did not understand many of the useful terms that were commonly used by the research worker in practical arts and vocational education. These are referred to as "scientific" terms. Such terms need to be studied if modern professional literature is to be read and understood with any degree of accuracy. Analyses of the term "Manual Training" even, involve scientific language. Such an assumption, then, indicates the importance of studying the two types of terms together as indicated by some of the groups of terms that follow.

Somewhere in the Investigation should be reported that an eminent authority on dictionaries says that there is really no such thing as an *exact* synonym. Such a statement should challenge the student or teacher to study his own vocabulary with great care throughout the years of his growth.

Can you make distinctions between pairs and groups of the following terms?

1. Manual Training, Manual Arts, Industrial Arts, Practical Arts.
2. Vocation, Occupation, Avocation, Prevocation, Education.
3. Pease Work, Sloyd, Pyrography, Russian Manual Training.
4. Round Table, Seminar, Academy, Symposium, Association, Council.
5. Technician, Scientist, Philosopher.
6. Purpose, Objective, Criterion, Function.
7. Assumption, Authority, Postulate, Theory, Hypothesis, Opinion.
8. Subject, Activity, Course, Content, Work.
9. Research, Investigation, Experiment, Analysis, Induction.
10. Correlate, Coordinate, Articulate, Orient, Integrate.
11. Logical, Psychological, Terminological, Recapitulation.
12. Mean, Mode, Median, Percentile, Decile, Quartile.
13. Attitude, Aptitude, Capacity, Habit, Interest, Skill.
14. Teach, Train, Educate, Counsel, Guidance, ...

V. SELECTIONS FROM THE MASTER WORD LIST.

A. Terms Using the Word *"Arts"* (25)

agricultural arts
appreciational arts
arts
arts and crafts
constructive arts
creative arts
cultural arts
developmental arts

expressional arts
fine arts
formative arts
graphic arts
household arts
industrial arts
industrial arts education
manual arts
mechanic arts
mechanical arts
nautical arts
practical arts
practical arts education
technical arts
useful arts
vocational arts
general industrial arts laboratory

B. Terms Using the Word *"Industrial"* (25)

general industrial arts laboratory
general industrial school
general laboratory of industries
industrial
industrial activities
industrial art
industrial arts
industrial arts education
industrial college
industrial education
industrial engineering
industrial home school
industrial institute
industrial intelligence
industrial mechanics
industrial relations
industrial school
industrial science
industrial social studies
industrial studies
industrial training
industry
laboratory of industries
manual industry
vocational industrial education

C. Terms Using the Word *"Manual"* (15)

manual
manual activities
manual art
manual arts
manual dexterity
manual dexterity education
manual education
manual exercise
manual industry
manual intelligence
manual labor
manual training
manual training education
manual training form
practical manual training

D. Terms Using the Word *"Practical"* (7)

practical
practical activities
practical arts
practical arts education
practical education
practical manual training
practical training

E. Terms Using the Word *"Training"* (8)

industrial training
manual training
manual training education
manual training form
practical manual training
practical training
teacher training
vocational training

F. Terms Using the Word *"Vocational"* (7)

vocation
vocational arts
vocational education
vocational guidance
vocational industrial education
vocational selection
vocational training

G. Terms Referring to Some Type of a *"General Shop"* (32)

agricultural farm shop
composite shop
comprehensive shop
diversified shop
everyday mechanics
farm mechanics
farm shop
general industrial arts laboratory
general laboratory
general laboratory of industries
general mechanics
general shop
home mechanics
household engineering
household mechanics
industrial activities
industrial arts
industrial mechanics
laboratory of industries
laboratory shop
manual activities
manual arts
manual education
manual industries
many purpose shop
mechanic arts
mechanical arts
multiple activity shop
multiple purpose shop
practical activities
several-purpose shop
vocational arts

VI. ETYMOLOGIES OF CERTAIN SELECTED TERMS

Prepared by Herbert H. Hutchinson

ACADEMY, n. from the name of the hero *Akademus.* First given to the garden near Athens in which Plato and his colleagues held their discussions on philosophy. The name then came to mean a school of philosophy. Italian *accademia,* a learned assemblage; French *academia,* a school.

ART, n. *ar,* to fit; *ars,* skill; Old French *art,* skill; skill, method. (ARTS, n. plural of *art.*) Refers to skill and method in adaptation. Is a relative term of quality.

ASSOCIATION, n *ad,* to; *sociare,* to join; *socius,* a companion or follower; *sequi,* to follow; *ion,* suffix denoting result of an act; the result of following or the coming together of companions.

CLUB, n. Swedish dialectic *klubb,* clump, a closely associated group of men, a clump of turf; German *clumfen,* clump; Icelandic *klumba,* club.

COUNCIL, n. *con,* with or together; *calore,* to call; also Greek, to call; French *concile* same as Latin *concilium,* assembly.

COUNSEL, v. *consulere,* to consult; *consilium,* a deliberating body; French *counsulere,* to deliberate; one or more who deliberate on a problem or the decision they reach as a result of thus deliberating.

EDUCATION, n. *educere,* to bring or lead out; the result of leading or bringing out. (Note the opposite conception from dictated instructions or extrinsic methods.)

EXPLORE, v. *ex,* out or from; *plorare,* to cause to flow; *explorare,* to cause to flow out, to search out; to search out or for, hence to investigate. (Of unusual interest here is the conception of exploration being achieved through "investigational" methods; where "manipulation" would naturally be only incidental.)

GUIDANCE, n. Anglo Saxon *witan,* to guard, to keep, to know; Old French *guidar,* to guide; *ance,* suffix signifying process; the process (implies continuing) of keeping, knowing, and guiding.

INDUSTRIAL, a. *indu,* into; *struere,* to build; *industria,* to build into, diligence; *al,* pertaining to; pertaining to building into or to diligence, or broadly to all forms of economic activity.

INTEGRATE, v. *integer,* whole; *integrare,* to make whole; to make complete or whole.

KINEMATICS, n. from Greek words meaning a motion and to move; *ic,* belonging to; belonging to the science of pure motion especially without regard to the force or mass. (Compare with MANUAL and note that neither involve motive, purpose, or psychological force and discriminative ability. It is felt that the two terms have much in common.)

LABORATORY, n. *e,* out, extremely; *laborare,* to work, toil; *elaborare,* to work out fully and completely, or with great pains; Middle French *elaboratoire,* workhouse; a room where careful work is done. (Note here the implications not only of "manipulation" but of "planning," "experimenting," "investigating," and "judging" as well.)

MANUAL, a. Root *me,* to measure (so many hands high); Sanskrit *ma,* to measure; and *nis,* out; *manis,* to cause, to build; *manus,* the hand or more originally the measurer; French *manuel,* handy, pertaining to the hand; by the hand or suitable for the hand or pertaining to the hand.

MENTAL, a. *ment,* from *mens,* mind; *mentalis,* mental; *al,* pertaining to; pertaining to the mind.

MUSCLE, n. *mus,* mouse, *musculus,* diminutive of mouse or little mouse, named from the creeping motion of some muscles.

OCCUPATION, n *oc* or *ob,* upon; *capere,* to hold, seize, or grasp; *occupare,* to get possession of; *ion,* denoting action; the action of seizing, grasping, holding or possessing something as a line of endeavor. Refers to any action or state of being busy.

POSTULATE, n. *postulare,* to demand; *postulatum,* that demanded; a proposition demanded, hence assumed or taken for granted without proof.

PRACTICAL, a. from Greek words meaning, to do, to be done, to accomplish; *practicare,* to practice; Old French *practique,* experience; *al,* pertaining to; pertaining to that done or accomplished or experienced. (With useful ends in view not limited to the "manipulative" activities at all.)

PRACTICUM, n. from Greek words meaning to do, to accomplish; *practicare,* to practice; a place of doing or accomplishing or practicing.

RESEARCH, n. (pronounced with the accent on the *second* syllable) *re,* again or back; *circare,* going around; Italian *cercare,* to seek; French *chercher,* to seek; a seeking again, hence a careful search; seeking especially to secure full information.

SEMINAR, n. Root *se,* from *serere,* to sow; *semen,* the sperm or seed; *seminalis,* pertaining to the sowing of seed; *seminare,* to sow; *seminarium,* a seed plot; *ar,* pertaining to; pertaining to the sowing of seed, or pertaining to the nurturing of the seeds of thought, hence a seedbed of thought.

SHOP, n. Old High German *scopf,* porch or vestibule; Middle Low German *schoppe,* shed; Modern German *schopf,* lean to type of structure, barn, porch; Old French *eschoppe,* booth; French *echoppe,* a tradesmans stall, a lean to type of booth; English Dialect *shippen,* cow shed; a porch, barn, lean to building, cow shed, booth, cobblers stall. (Compare with LABORATORY and decide which we ought to use.)

SYMPOSIUM, n. from Greek words meaning together and drank, also fellow drinker; Latin *symposium,* a feast with drink, a drinking party; *syn,* together; English *potable,* drinkable; a merry feast or banquet, a meeting for discussion or a collection of ideas exchanged at such a meeting.

TERM, n. from a Greek word meaning limit; *terminus,* boundary or limit; French *terme,* a limit of space or time or meaning; a limit of time, as a term of study in school, or a limit of meaning, as just

that which is conveyed by a certain word or group of words; boundary or limit. (I include this word to indicate that a professional term like "Manual Training" as a *professional term* should indicate or define the limits or boundary of what we try to do. "Skill of hand," naturally does *not* do this.)

TERMINOLOGY, n. from a Greek word meaning limit; *terminus,* boundary or limit; French *terme,* a limit of space or time or meaning; *ology,* science or branch of knowledge; the science or branch of knowledge pertaining to limits of space or time or meaning; the branch of knowledge pertaining to terms.

THESIS, n. from a Greek word meaning to place or put, also another meaning placed and a proposition; Latin *thesis,* a proposition; a proposition placed or put down especially as for discussion or to be maintained against attack.

THEORETICAL, a. from a Greek word meaning to inspect also one meaning that which may be seen or contemplated; *theoris,* speculation, a looking at; *ical,* a suffix meaning pertaining to; pertaining to speculation or contemplation or inspection of something. (The shop teacher so frequently scoffs at things which he terms as theoretical, yet he uses the technique every day and as frequently as he uses his judgment.)

TRADESMAN, n. Middle English tred and trod, as with the feet; Swedish dialect *trod,* a worn or beaten track; Anglo Saxon *tredan,* to tread; Anglo Saxon *mon* or *mann,* a human being; a human being who treads a beaten track, especially in his vocation.

TRAINING, n. *trahere,* to draw; *trahinere,* to drag; Middle English *traynen,* to entice; French *train,* the rear end of a great beast; Old French *trahin,* a following string of men; Italian *trainare,* to trail or draggle on the ground as a sled; *ing,* suffix forming a noun; the process of enticing or dragging after one a string of men as a sled, or as the rear end of a great beast. Refers to a series of things as exercises, and to drill, discipline, and skill as well; accomplished in logical, stated, sequence.

VOCATION, n. *vocare-atus,* to call; *vocationem,* an invitation; *ion,* suffix denoting result of an act; the result of being called, especially into a regular employment.

VIII. LIST OF RESEARCHES CONTEMPLATED IN THE ASSOCIATION'S INVESTIGATION OF TERMS.

A. *The Etymology Study.* Now completed. (800 Terms.)

B. *History of First Professional Uses.* Probably the most logical person for such a study would be Charles A. Bennett of the Manual Arts Press. Such a study could be brief and limited to a fairly short list of the most troublesome professional terms. In passing it may be noted that Mr. Bennett himself, first introduced the term "Manual

Arts." This was in 1896 with the naming of the "Macy Manual Arts Building" in New York City.

C. *Study of Contemporary Usage in Different Places and by Different Organizations.* While this study is of the master's thesis type, I would like to see it undertaken by someone like Homer Smith who is both familiar with research techniques and the many interesting professional developments in different sections of the United States and Canada. Eastern Canada uses the term "Industrial Science," California "Manual Education," Chicago "Manual Training" (?), Philadelphia "Mechanic Arts," Cleveland "Practical Arts" and "Manual Arts," The Eastern Arts and American Vocational Associations use "Industrial Arts," one magazine uses "Industrial Education," the other will use "Industrial Art and Vocational Education" from now on. All points of view must be equally respected. It may develop that the answer does not lie in this approach.

D. *Analysis of Terminology Confusion Among 358 Shop Teachers in Ohio.* The raw data of this study have been assembled by the writer and can easily be made ready for the final report. One part of this investigation was reported in the *Policies* Study published in 1928.

E. *Psychological Implications of Certain Terms.* Such a study involves much that will be of help in preparing the final glossary. It would have to be made by a person well versed in psychology. Do we "train" or "educate," how is "skill" or "habit" formation accomplished, etc. The different ways that things are best done would be labeled with different terms. This is well illustrated by the two terms "Manual Arts" and "Creative Arts."

F. *Terms Representing Certain Philosophic Demands.* Someone has said that a professional term is usually used to represent a point of view or philosophy. "Manual Training" does not necessarily do this while many other terms do. "Manual Training" indicates a *method* of doing things. The term says literally, "do *'it'* by hand." We are not clear what *"it"* is.

G. *A Study of the Views of Leaders.* This is a master's thesis study and would involve but two techniques, a bibliographical and field study. David Snedden has probably done more work that could be reliably used here than any other single person, but all would need to be studied.

H. *Individual Reactions to the Findings Presented.* In all probability this is a responsibility of the committee. It would give any critics of the study ample opportunity to react, and this should be done if everyone is to feel satisfied.

I. *Preparation and Publication of a Final Glossary.* This naturally is a responsibility of the committee, or better some research group, and would be classed as an *inductive analysis,* purely.

RECOMMENDATIONS OF THE INVESTIGATION THUS FAR

IX. It is not unlikely that one outcome of the Investigation will be, "Determine what you are doing, then call it by its proper name as defined." If we do "Research," then call it that; if "Manual Training," then call it that; if "Methods of Teaching Industrial Arts to Junior High School Pupils," then call it that; if the discussions are to be limited to "Occupational Studies," then call it that; if we stage a "Symposium on the General Shop" as was done in New Orleans, then call it that; if a session is devoted to "Consumer Values," then call it that as I did recently in Columbus during the University's Tenth Annual Educational Conference. It might be more satisfactory even to call it the "A" section, "B" section, etc., as defined by the unified character of the program in question, and so the reasoning goes.

Interpreting Modern Demands Through Industrial Arts Teacher Training Programs

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THE challenging *range of demands on the modern industrial* teacher, supervisor and director brings a constantly growing set of requirements in the teacher training institutions. These demands have their origins in the rapidly expanding American educational program and are having marked effects on shop planning, operation, and teaching requirements. The manual arts teacher training program today must be based on *continuous survey studies.* These studies must focus on, first, the *rapidly developing educational structure,* second, the *significant factors in our rapidly changing civilization* and third, on the *development of instructional procedures and devices.* The modern industrial arts teacher must be a keen *student* of our modern civilization, a keen, accurate *interpreter* and a thoroughly up to date *educator.* The operation of an industrial education program which clearly recognizes pupil purposes in industrial work in terms of Brewer's six steps, calls for teachers whose training has given them breadth and efficiency in several directions.

The current demands on manual arts teachers may be sorted in various ways. If they are sorted according to origins they classify as follows:

*1. Those caused by the modern practices in classifying school pupils.
2. Those caused by the needs for instructional material to solve the instructional situations resulting from No. 1.
3. Those resulting from modern studies of space, use, distribution, and cost in school plants.
4. Those resulting from the rapid changes in the occupational fields that constitute the sources of content for the various phases of industrial education.
5. Those caused by needs for shop equipment provision to handle the pupil groups sent to the modern industrial teacher as a result of No. 1, fitted to the instructional solutions using various types of materials under No. 2, meeting the requirements resulting from the studies under No. 3, and having a range and adaptability to keep pace with No. 4.

The demands for manual arts and industrial arts teachers are *rapidly moving in the direction of the basic requirements of these demands.* The program through which the Stout Institute has traveled in the development of its manual arts teacher training curricula indicates the various advancements in the requirements upon manual arts teachers. In the early years of its existence, the manual arts teacher training program was primarily a two-year schedule. This schedule at its best was a compromise, picking necessities from the larger group of the desired total. In 1917 the Stout Institute was regularly authorized to grant the B.S. degree, and began to do so at that time. From that time until 1926 there were offered two, three and four-year courses. *The trend in the demands had become such that beginning in the fall of 1926* all entering students were registered on the *four-year basis.* Students in the shorter courses were allowed to finish the courses which they had begun if they so desired. The school is now on the four-year basis solely.

Coincident with the placing of the school on its present basis in the fall of 1926 and the elimination of the two- and three-year courses there came the necessity for intensive work *integrating the various arrangements in the curriculum.* The results of this work are indicated in the large blue print.

The purpose of this curriculum work was to develop a balanced, effective, *modern college curriculum* which has woven into it through *guided choices, provision to meet the vocational requirements of the modern industrial educator.* These requirements in our current situation may be grouped in a three-fold classification and are, first, the *requirements of the teaching position in its content;* they are second,

* From "Trends in Industrial Education and Their Effect on School Shops"—Clyde A. Bowman, Dean, School of Industrial Education, and Floyd Keith, Head, Departments of Sheet Metal and General Metal, The Stout Institute in **The Nation's School,** February, 1930.

the requirements of *licensing divisions of state departments* of education. During the last decade or two there has been a very marked centralization of the licensing and certifying function in state departments. Third, there are *requirements for graduate school entrance* to make provision for a continued study on the part of industrial educators to keep abreast of the times.

As is indicated in the blue print in the freshman year, men at the Stout Institute in industrial teacher training take a required group of eight nine-week shop and drawing courses. They also take beginning education courses, physical education, English and Social Science. At the end of the freshman year they are confronted with the first fork in the roads. From this time on all shop, drawing and design courses are elective. To assist the student in his choices at this juncture are four faculty counselors. The record of the student is available for guidance in making the choices, an analysis of the calls for teachers for the past four years up to March 31 in which the student was a freshman, is available and a record of the typical combinations of work. These combinations and these analyses of calls are sorted to indicate trends in the teacher market. Interpretations of these trends are made, advice and counsel is given the students in these interpretations. The selections of courses continue in the second, third and fourth years as indicated in the blue print. *The shop, drawing and design courses in the four years bring to a focus* the technical acquisition in the preceding three years, and draw in significant points secured in the education sequence and in the academic sequences. The result of this curriculum work has been successive groups of graduates fitting market requirements with astonishing closeness.

The development of the sequence of educational courses has been based upon the demands indicated in the early part of this paper. These prepare the student in Educational History, Educational Principles, and Educational Practice. Certain choices from groups of courses are allowed depending upon the types of school for which the students are pointed.

The second fork in the roads for the student is at the close of his sophomore year. At this time he selects one of three academic sequences. Having selected the sequence he is required to take the groupings of work as designated in that sequence. In *his third year he has certain choices in electives.*

Every student as he follows the educational paths of travel throughout his four years of travel is conscious of the fact that he has a *definite plan for his education.* While he is given choices at numerous places along his travel, at the same time certain control is exercised over these choices to prevent the student from short-changing himself.

Each of the subject groups such as Education, English, Science,

Math, Social Science, Physical Education, Metal Work, Woodwork, Printing, Electrical, Drafting, etc., all have individual lay-outs which serve as work sheets for the continuous curriculum work of the faculty committee representing these groups. As a result of this there has rapidly developed a definite sequenced program through the various groups of subjects. In developing this curriculum for industrial educators the specific scrutiny of the content in the several courses in the curriculum has recognized the requirements of the content itself in the sequenced program.

In scrutinizing the sharpness of application of the material the curriculum as a total has been sharply measured in terms of its preparation of teachers to meet the demands indicated early in this paper. Content in education courses has been selected and distributed to give the students a thorough understanding of modern practice in school operation. In their methods courses and their practice requirements focussed opportunity is provided for the preparation of instructional material in the various modern forms to meet large classes and mixed instructional groups. The students are taught an analysis procedure and a recording procedure which enables them to orient all change in industry. Samples of this procedure are here for your inspection. While at no time has the continuing need of the single activity shop been lost sight of, there are at this time four general shops being operated at the Stout Institute. These shops are used in various applications to acquaint the industrial teachers in training with the various operating management procedures necessary in using a shop of this type.

Using the devices suggested, recognizing content breadth and content sequence as indicated and meeting the demands of the types listed, makes possible a curriculum consistently up to date in its interpretations of the modern demands on manual arts teachers.

Printing Education in America

FRED J. HARTMAN

Director of Education, United Typothetae of America
Washington, D. C.

A RECENT report issued by the United States Office of Education refers to printing as one of the branches of industrial education that showed considerable progress during the past two years. A high governmental official in another branch of Federal service made the public statement that printing is one of the few major industries that is adjusting itself to changed business conditions by reason of its program of education.

An English educator, J. R. Riddell, Principal of the London

School of Printing, spent several months last year, making a study of Printing Education in America. He visited twenty-four cities covering an area extending from Quebec in Canada to Tennessee and from New York City to Chicago. Over 240 visits to printing plants and schools were made. His report to the Advisory Council of his school, while open to criticism in certain particulars from our viewpoint, is a highly interesting review of printing education and worth-while giving in full at a meeting of this kind. Mr. Riddell says:

"Just as America is industrially prosperous, so is she also educationally extravagant. For a number of years the educational standard was not high, and the facilities provided were far below that required by a progressive people—but the pendulum now seems to have swung completely in the opposite direction. Magnificent and costly buildings are erected for educational purposes, and in many instances lavish and unnecessary expenditure on equipment is apparent, but, unfortunately, all this does not convince one that sound fundamental and constructive work is always being done.

"It has been estimated that there are over 3,000 schools with printing departments in North America, the majority of these, however, are associated with schools instituted for general and higher education, few being used solely for the purpose of improving the efficiency of those employed in the printing industry. Printing is looked upon as a 'cultural' as well as an industrial subject. A number of printing schools are over-equipped, but there are apparently not more than twelve which are definitely engaged in the work of providing a technical training for those employed in the industry. An unusual feature of some schools is that they undertake work on a commercial basis—in fact, in one State vocational training has to be so conducted that a certain proportion of work done in the school must be on a competitive basis.

"Many strong expressions of disapproval against the vocational training, as it is usually conducted throughout America, were expressed by those engaged in the industry. Some of the practices followed must of necessity militate against the best interests of the business.

"An interesting reason was suggested for the extravagance usually encountered in vocational schools. About a quarter of a century ago, preceding the operation of the emigration laws, America attracted to its shores some of the best printer craftsmen in Europe, these supplying the needs of the industry; since then the emigrants have mainly consisted of farmers and semi-skilled men, with the result that there is now a dearth of good craftsmen, and arising out of the demand for skilled men, the schools

have received an impetus, and money is not spared in giving the youth of the nations a preparatory training in the trades.

"There is apparently no recognized system of apprenticeship outside the large cities (although the trade unions are pressing for an apprenticeship scheme of training) and the boys come out of schools, enter the works, and frequently go from firm to firm whenever increased remuneration is offered. This cannot assist in the making of efficient craftsmen.

"The work of the United Typothetae of America, in its efforts to co-ordinate the teaching given in the schools, and for its encouragement of a recognized scheme of training, is commendable. The trade unions are doing valuable work insofar that they themselves have instituted courses of instruction for their members, but, here, again, in many instances it falls short of what could be achieved if the schools were under the joint control of employee and employer and working for the common good of the industry.

"There is little or no co-ordination in some instances. Classes for compositors are held in a different part of the town to those formed for pressmen, this must prevent the production of a finished piece of work, which is essential if the best results are to be secured.

"Certain unions have instituted schemes of education by correspondence, and they require that before a boy can become a member of the Union he must pass an examination in their course of instruction. Valuable work is being done along these lines, although perhaps somewhat limited.

"Mention must be made of one of the best efforts to improve the efficiency of the worker. At Tennessee there is a fine technical school, maintained by the Pressmen's Union, equipped with the latest types of machinery for letterpress, offset, and gravure, printing, at which members of the union attend for special courses of instruction. It was interesting to learn that numbers of men make long journeys to obtain the benefits which this progressive association provides. Another feature of this union's activities is the maintaining of an engineer of wide experience to advise employers and executive staffs on how their products may be improved. Much useful and valuable work has been done, and is clear evidence that this Union has an interest in the progress and development of the craft of the printer.

"Although correspondence courses of instruction cannot be so effective as where a student is in contact with a qualified teacher, the lessons are a model of conciseness and thoroughness.

"It is unfortunate that there is so little cooperation of a practical form between employers and the unions in their efforts to raise the standard of craftsmanship. In one or two instances where

there is a working agreement between employing printers and the unions, good work is being done, otherwise technical education seems to be carried out on individual lines. A joint effort, with co-ordination of classes, would be more effective and certainly more economical. In some towns endeavours are being made to bring about this desirable condition.

"There is a scheme on foot in New York City, however, which has for its object the establishing of a school embracing all sections of the industry, which may shortly become an accomplished fact. This will become an educational center for the whole of the industry and will be of incalculable benefit to the crafts associated with the movement. The project not only embraces technical work but scientific research—a work which cannot be dissociated from a school organized to meet the needs of a progressive industry.

"Very little is being done for the technical training of those engaged in photo-engraving, bookbinding, and electrotyping; this may also be said of lithography, although in one or two isolated instances classes have been started, but mainly in co-related subjects. The newspaper publishers maintain a school where students may take a course of mechanical composition suited to the needs of newspaper production.

"The school at the Carnegie Institute of Technology, Pittsburgh, for the training of executives, is an outstanding example of what it is possible to achieve when the best interests of the industry are the first consideration.

"It was encouraging to hear frequently how the London School of Printing was referred to as a model for others to follow.

"Generally speaking, more is expected of the American instructor than is customary with ourselves. He undertakes evening work in addition to the ordinary day classes. It is quite common for instructors to work in an industrial firm during vacation periods.

"In obtaining suitable teachers, similar difficulties to those encountered in our own country are experienced. To get qualified men for the posts, the printing organizations, in numerous instances, contribute a sum of money to enable the instructor to receive a salary over and above the scale allowed by the educational authority; there are, however, a number of teachers, who, for lack of a sound industrial experience, cannot be said to be wholly suitable for the positions they occupy.

"The educational authorities of New York State have a scheme in operation which we, in this country, might with advantage consider. It is that before a man is appointed as a teacher, he must possess certain educational qualifications. To secure these

qualifications, one full year or three years' part-training is required. Special grants are made to chosen men, in order that they may attend full-time courses of training in pedagogy. The names of those who secure the necessary qualifications are registered, and teachers for vacant posts are chosen from this register.

"The pre-workshop training—a feature of the American educational system—except in the case where a boy has a berth to go when he has finished his school training, or in the instances where large firms have their own apprenticeship system and prepare their apprentices to go into the works with some knowledge of the work they will undertake, is, it is to be feared, largely a waste of effort and public money.

"A remarkable instance of pre-workshop training was seen at a Deaf Institute in Philadelphia. Here justification, even if only from the humanitarian point of view, can be found for spending public money on teaching handicapped boys a trade, preparing them to earn a livelihood, and making them self-respecting citizens. The work being done at this institution was highly commendable, and must prove of benefit to the community, and of the greatest value to the afflicted boy.

"Such a provision would be worthy of consideration in relation to our own scheme of training, it having been proved that when time and patience is expended in the training of a deaf person as a compositor or bookbinder he is usually very efficient. We have, in fact, a most remarkable example in our own school where a deaf man is not only a most efficient craftsman but in every way (despite his unfortunate handicap) a most capable instructor.

"Although there is a multiplicity of printing schools in North America, I am convinced that we in this country more than hold our own in providing sound and helpful instruction, where such is arranged, to meet the needs of the industry, but it must not be overlooked that the conditions prevailing in the two countries are vastly different—we have centuries of experience of an apprenticeship system, which even with its shortcomings, is a valuable foundation upon which to build efficiency, whilst America may be said to have not yet reached either the stage of "Stabilization" or accepted fundamental principles of craft-training. They are largely depending upon a vocational training, but a school can never take the place of the workshop.

"In comparing the differences between the conditions and practices of printers in America and those in our own country, my pressions are that in this country we depend to a large extent on the skill of the workman to produce good work, while the American depends upon the engineer and the research investigator

to provide the appliances to secure high production. Whilst our apprenticeship system enables us to provide craftsmen with a sound training, the Americans look more for workers with an aptitude for adapting themselves to new methods, processes, and changing conditions. The Americans possess the organization and plant for getting the work done quicker and with less effort; we are concentrating on making good craftsmen. They have a good deal to learn from us, and we have much to learn from them: especially in the manner in which they apply themselves to their jobs."

It is not our purpose to pick out the flaws in this report, but merely to call attention to certain misapprehensions which are evident to those of us who have a wider knowledge of the real conditions. Mr. Riddell states there are "many strong expressions of disapproval against vocational training" implying that those come from "those engaged in the industry." The fact of the matter is, that as far as printing is concerned, no other industrial subject, now taught in our school, has as strong a backing from industry. The employers, represented by the United Typothetae of America, cooperate wholeheartedly with schools of printing in all parts of America. The cooperative service consists of supplying basic text material, of furnishing equipment in some places, in publishing a magazine for teachers of printing, of maintaining a Department of Education which is in continual touch with teachers and school authorities. Organized labor while not actively engaged in assisting schools has well-organized correspondence courses for union apprentices and where this educational material is used in schools of printing, under proper conditions, recognition is given by the union, through giving credit towards apprenticeship. The Printing House Craftsmen movement, aside from its program of adult education among its own members, gives encouragement to the public program through apprenticeship rallies and contests of various kinds. The leading manufacturers of printing equipment conduct educational departments which are in direct touch with school authorities. Printing trade magazines devote a great part of their space to promoting the cause of printing education in schools.

The report points out that there is no organized system of apprentice training. This is true. But, it is equally true that America has had no apprenticeship problem since the training work has been so generally made a part of the public school program. There are some 3,000 schools of printing in America of all grades—offering printing as a manual arts subject, as a prevocational subject, as an industrial arts subject, as a vocational subject, as a teacher-training subject, as an engineering subject, and as a fine arts subject.

That industry is profiting by the school training is evident from the surveys that were conducted within the past two years. At the

end of the school year 1928-29, some one hundred representative schools were selected in the various grades, to discover how many of the graduates were actually entering the industry. It was found that from 113 schools, there were 3,368 graduates for the year, 2,081, or 62 per cent, had become identified with the industry. The following table shows the numbers from the various types of schools:

Type of School	No. of Schools	1927-28 Graduates	Graduates Entering Industry	Percentage Entering Industry
Elementary Schools	2	75	0	0%
Junior High Schools	16	572	90	16%
Junior-Senior High	7	114	36	33%
Senior High School	33	586	173	29%
Trade or Vocational	39	1751	1590	89%
Plant or Shop School	4	79	79	100%
College	4	38	31	82%
Special Schools	8	153	82	53%
Total	113	3368	2081	62%

Last year we enlarged the scope of the study, including 283 schools. The graduates from the printing courses numbered over twelve thousand, 4,950 of whom, or 39 per cent entered the industry. It is to be noted from the following table that some came direct from the elementary and the junior high schools. This ought not to be. The fact of the matter is that the printing industry needs and wants high school graduates and the demand is becoming more and more insistent for the college graduate, particularly for the managerial positions.

Type of School	No. of Schools	1927-28 Graduates	Graduates Entering Industry	Percentage Entering Industry
Elementary Schools	10	691	30	4%
Junior High School	41	3823	329	8%
Junior-Senior High	80	1914	557	28%
Senior High School	27	504	121	24%
Trade or Vocational	89	4585	3273	71%
Plant or Shop	6	578	554	96%
Colleges	15	230	39	17%
Special Schools	12	31	20	64%
Total	283	12857	4950	29%

Mr. Riddell makes the further point that a "School can never take the place of a workshop." American industry is so organized that it is next to impossible to train workers on the job. In printing, particularly, when an industry has been almost completely revolutionized within the last generation by reason of new processes, automatic equipment, larger visions of service, new workers need the general education, the vocational viewpoint to meet changing condi-

tions that can come only from school training that keeps step with industry development. Then, too, it must be remembered that American education makes for democracy in industry as well as in politics. It is not our aim to prepare a young man merely to be a shop man. Printing needs well-trained craftsmen, but there are, in addition, unlimited opportunities for vocationally trained folks in the office and on the field. In other words we believe that the master printer of tomorrow, will get his training for his work in the schools of printing.

The Story of Water Color Inks

AL SUTPHIN

Vice-President Braden Sutphin Ink Company
Cleveland, Ohio

I WANT to thank you for the opportunity of permitting me to bring to you a message concerning the proper uses of Water Color Printing Inks, and their advantages.

Printing with Water Colors—a mysterious process—a fad—a passing fancy—is it? I should say that if Water Colors were only beautiful and not commercially profitable, they must be classed as a fad, to be sure.

However, Water Colors are not entirely new, having been used four hundred years ago in China, and were the only inks used up to the advent of movable type, when Oil Inks were first manufactured. Late in the last century there was a decided effort to inaugurate Water Colors. But all the printing of that period was in black with only slight touches of color—mostly the standard Red, Blue, or Orange.

Three years ago Jean Berte brought to America a bizarre type of French printing in brilliant hues—colors that were impossible to obtain with Oil Inks. Inasmuch as this is a color age with every advertising man and artist designing his work in color this Water Color process met with instant response.

Unfortunately, the Jean Berte system and process was expensive, necessitating the payment of license fees and royalties, in addition to the equipping of presses with expensive rubber rollers costing nearly four times as much as ordinary rollers.

This system further placed a limitation on the type of work which could be printed in Water Colors as the soft rubber plates used could not be engraved but had to be cut by hand with a knife, consequently adaptable only to the more or less plain or solid subjects. Then, too, it was necessary to train men for cutting and handling this soft rubber plate. All this meant that only the largest printers with tremendous quantities of fine color work could afford to equip plants in this manner.

Now, understand, Water Color Inks were much to be desired inasmuch as they were brilliant in color, dried almost instantly, could be run without offset and without slip-sheeting (or interleafing, as it is called in Europe); and if a way could be developed by which Water Colors could be run with regular equipment, then these inks could be used by *every printer.*

For Art and Printing Departments « « « «
Braden Sutphin Water Color Lin-Oli-Inks

ART and printing instructors have given an enthusiastic welcome to LIN-OLI-INKS since their introduction at the Western Arts Association Convention last May.

Art instructors and pupils find that LIN-OLI-INKS mean, in addition to beautiful prints, easily executed, the elimination of dirty, smeary oil inks. Clothing, furniture and hands are not stained. Inflammable ink removers need no longer be a class room hazard. Water alone removes these water color inks from all surfaces.

And with the rapid commercial development of water color printing, printing instructors realize that their students are not thoroughly equipped in their trade without a knowledge of the Braden Sutphin process.

The many features and advantages of Water Color LIN-OLI-INKS as given to the Western Arts Association Convention by our Vice President, Mr. Sutphin in his speech, reprint of which appears in this issue, will be gladly discussed with you by ourselves or representatives of our agents as listed below.

Selling to the Schools
THE MILTON BRADLEY CO.
Springfield, Mass.
and its many branches.

Selling to the Stores and other sources of Supply
FAVOR, RUHL & CO.
Chicago New York

THE BRADEN SUTPHIN INK COMPANY

1736 East 22nd Street
Cleveland, Ohio

Cable Address: Waterink

You realize, of course, that no printer is going to print Water Colors only—Oil Inks will continue in use—but *with the Braden Sutphin development and process it is possible for any printer to print that work in Water Color which should be so printed to eliminate Oil Ink disadvantages.*

Our development is simply this: The printer is furnished a Roller Coating solution which when applied to the ordinary roller gives it an affinity for the Water Colors and acts as a protection between the roller and the inks.

Further, regular plates have no affinity for these Water Colors, so we also furnish a Plate Wash that gives a "bite" or "etch," if you please, to the plates or type matter that permits printing without mottle or streaks. This wash does not in any way injure or change the plates, so that after the water color job is finished these plates may be used for Oil Ink printing without any further treatment.

Concerning the Roller Coating, the Water Color work is anticipated the night prior to running, and that is easy, for surely every successful printing plant has its work planned for the coming day. Old rollers which are dead and have no life or tack, are the best rollers for the coating operation. This treatment puts life and tack into the surface of an old dead roller so that it will distribute the Water Color Inks properly. Merely ink the press with Roller Coating in the same manner as with a black or color ink, run the press until the coating is thoroughly distributed, then lift the rollers from the press and stand them aside until morning when they will be completely dried, and, after washing with cold water, ready for use.

The Plate Wash should be applied by cloth or sponge to all printing surfaces—to the plates themselves—to the steel rollers on the press—to the ink distributing plate—and it is well even to wash the fountain. This takes but a few minutes, and you are then ready to print naturally with the same make-ready as for Oil Inks.

It is only fair to add at this time that for those printers preferring to use rubber for solid surface plates, there are in most localities *now* certain engraving houses that are cutting rubber plates for the printer —well and economically. Also rubber plates are now available which can be engraved or routed with the regular engravers tools and easily cut to the desired shapes by men with very little experience in this work.

May I give briefly a summary of the advantages of Water Colors?

First. Brilliancy of color—fine, brilliant colors that cannot be duplicated with Oil Inks. However, we hold that this is the least of the advantages.

Second. The almost instant drying of these inks. Under normal conditions it is possible to cut or fold in eight minutes. We have many

fine samples and examples bearing out this assertion. (Sample display by Mr. Sutphin.)

In spite of this remarkable speed of drying on paper, Water Color Inks will not dry on the press. Often they may be allowed to stand on the press overnight without washing up and the press may be started in the morning without the usual delay and waste of inking up and getting correct color.

Third. It is possible to run Water Colors without slip-sheeting or offset. You are all familiar with the "offset" difficulties experienced when overprinting one oil color on another. This is eliminated by overprinting Water Colors or an Oil Ink on top of Water Colors. Note the flat, dull appearance of these sheets, entirely devoid of shine, which is one of the reasons for no offset. (Sample display by Mr. Sutphin.)

Fourth. There is no crystallization when printing Water Colors. How many times, having printed the first color, and then being unable to follow with the succeeding ones immediately, has the first color crystallized to form a glassy surface not unlike a skating rink? With Water Colors it is possible to run the second color a year later, if desired.

You all know how rapidly Gold Ink Sizing dries and how hard it is under such conditions to get the "gold" to take. Here is a job on which the gold was printed seven months after the Water Color! (Sample displayed by Mr. Sutphin.)

Fifth. I sincerely hope that there are no artists present, for I must speak freely, although intending no offense. However, the commercial artist has been the bane of the ink manufacturer's life.

For years it has been the artist's custom to daub his sheet, permitting his brush to strike the same spot many times and building up a color strength with his artist's Water Color paints that could not be duplicated in Oil Inks. The buyer of printing would pass this drawing along to the printer, and he, in turn, to the ink manufacturer, for Oil Inks to match the Water Colors—which was quite impossible.

Now the thinking printer has his artists do the actual art work with *Water Color Inks* which, after all, are only Water Color paints made applicable to paper on a printing press.

The exact inks used by the artist will be standing in the press room of a print shop and there can be no mistake in the matching. Water Colors print with a flat, dull appearance and the printed copy should look as though an artist had done it with a brush.

Sixth. Perhaps the extreme opacity of Water Colors should be considered the supreme advantage. With even the finest of oil cover inks it is usually necessary to print two, or even three impressions of

the color in order to get first-class covering when using a dark colored paper.

Water Color Inks can be made very opaque and on most cover papers it is possible to get a very strong impression with one printing. I am pleased to show you many examples received from some of our finest printers wherein one impression of Water Color has produced the desired result, saving the printer extra impressions and much labor, time and money. (Sample display by Mr. Sutphin.)

On the other hand, Water Color Inks are also made in transparent shades so that intermediate colors can be produced by overprinting. These effects produced by overprinting are just as dull and flat as a single impression, and are entirely devoid of the shine and gloss which is invariably produced when oil colors are overprinted. Even the so-called dull inks will produce a gloss when they are lapped, and cause offset.

Now, with so many advantages, there must be, of course, some disadvantages, and the average layman will quickly respond with the thought: "Will Water Colors run when wet"; "How about mailing"; "Will they rub"; etc.

My answer to this is to show you many samples that have been through the mails. It is my opinion that any printed work, oil or water color, that becomes wet is spoiled. Dozens of Water Color jobs have been delivered through the mail to my home, for there is much Water Color printing done in Cleveland. I have asked Mrs. Sutphin to save these copies for me and, believe me truly, I have never seen one destroyed.

You may ask if perspiration from the hands will rub and spoil Water Colors. The answer is before you. I am a short, fat individual with more than my share of perspiring tendencies, and I have handled these samples for over a year and not one has a mark, although, to be sure, Water Color Inks are soluble in water.

Here is a post card. (Displayed) One hundred and fifty thousand of them, printed from Ben Dey plates in four colors for a wall paper concern, were mailed—and not one was destroyed!

Here is a direct mail folder and poster, (Displayed) printed two sides, mailed without an envelope, having large ink surfaces exposed —and no mishap here in a mailing of over a hundred thousand.

Here is a series of different envelopes, (Displayed) the exterior all covered with Water Colors, and all having been through the mails. These government post cards were used on the Pacific Coast, at Seattle, the rain country of America, and substantiates the fact that this solubility is not a hazard.

The reason for a printer to be particularly interested in Water Color printing is that it gives him the opportunity to be distinctive and interesting to the buyer of printing. After all, a printer has

nothing tangible to sell—merely ideas. Unless there has been an earthquake the preceding week what has the average printing salesman to talk about? *But let that same salesman have a group of fine Water Color samples under his arm and a background of fine work previously done—the buyer of printing is instantly aware that he is dealing with a concern that is alive to the "signs of the times."*

With reference to Linoleum Block and similar art printing, Water Colors offer the same advantages as in regular printing and in addition possess the feature of cleanliness.

Heretofore, many art departments had to forego this branch of art education, for the usual Oil Inks were dirty and messy, required gasoline or other inflammable ink removers to wash up, ruined clothing and furniture, required overnight drying and took so long to clean up (because the inks dried on the rollers, slab, printing equipment, etc.) that without extra long class periods very little could be accomplished.

Now, with our LIN-OLI-INKS, printing equipment, clothes, furniture, hands and other surfaces can be easily cleaned with water alone; the inks do not dry on rollers, slabs, or printing equipment. They wash off easily and are not dirty or messy to handle.

And let me tell you that it was one of the greatest thrills of my life, after the years of complaint I have had from printers about offset, to see at our booth, you instructors receiving one, two and three-color prints right from the press, and carrying them away with you, if not thoroughly dry at least sufficiently set that they would not rub or smear.

In closing, may I add that the obstacle Water Color printing has had to overcome is the tendency of the printer to decide that Water Colors are an art proposition and that it is impossible to make money on art work.

But in this message we have tried to show that with the many commercial advantages that Water Colors possess, they are not an art proposition alone, but can be printed commercially and profitably.

All In a Day's Work

EDWIN L. OLSON
Printing Instructor, Roosevelt High School
Minneapolis, Minnesota

MY TOPIC is rather vague and indefinite, and of such a nature as to cause suspense. What is more, the suspense may be just as great when I have finished, since I will say from the outset that I alone will not make any binding decisions, nor definite predications; but if any conclusions are drawn they will be intended to serve as mere dicta.

I hope you have not interpreted my subject too literally, and as a consequence anticipate a revelation of everything that transpires as a part of, or as being incidental to a day's work.

What constitutes a day's work is a question far too expansive for me to attempt to answer. It is an indefinite measure, dependent upon too many uncertain circumstances. Since work presupposes accomplishment, effort expended without some result capable of being measured, does not come within that classification. This theory is well exemplified by a poem of Henry Wadsworth Longfellow's, wherein he said: "Count that day lost, whose low descending sun, views from thy hand no worthy action done."

We must continually be aware of the fact that we are teaching the fundamentals of an art that has contributed possibly more than anything else to the rapid advancement of civilization. To be instrumental in teaching the young citizen something about the medium responsible for such a great accomplishment, is beyond doubt a worthy action to be done. "For what is any man, however learned or great, if stripped of the knowledge and power derived from the works that have come from the printing press? He is naught and has nothing left more than the merest uncivilized man. He was born ignorant and without printing he would remain ignorant."

It seems quite unnecessary, at this time, to argue in support of the teaching of printing in the schools. It is a principle whose justification is too well founded to permit questioning. But, when we speak of schools, do we refer to the elementary, secondary, or trade school?

As to the place and nature of printing instruction in our school system, Mr. Philip E. Carlson, Principal of the Roosevelt High School of Minneapolis, says: "Printing should be offered in the junior high school as an exploratory subject, and in the senior high school located in an industrial district as a pre-vocational subject. In a strictly vocational school, printing should be offered as a vocational subject."

Printing has already so firmly established itself as an essential part of the junior high school curriculum, that to eliminate it would be comparable to an attempt to strengthen a chain by removing a link which is an integral part thereof. The objective of printing in the junior high school, without a doubt, is primarily exploratory, and because of its correlation with other school subjects, it affords the opportunity for a liberal cultural training. We should not take too seriously the matter of teaching printing to junior high students, to the extent that we lose sight of the invaluable opportunity to inculcate habits of good citizenship.

Several questions may be propounded at this point, which I will not attempt to answer, but will leave them open for discussion.

1. What is the ideal length of the so-called try-out course? Is a term of ten weeks better than one of twenty weeks?
2. What should be the length of each class period?
3. What fractional part of the class period should be devoted to lecture?
4. How much can or should be taught in the course of ten or twenty weeks?
5. What is the ideal size of class?
6. Should each student have complete and individual equipment?

As printing has its place in the junior high curriculum, so it has a place in the senior high school. Printing in the senior high school is pre-vocational in nature, with a tendency at present toward vocational training. In support of the previous statement, I will take the liberty to quote in substance from a talk by Dr. Homer J. Smith, Associate Professor of Industrial Education, University of Minnesota.

1. All leaders in secondary education advocate vocational preparation.
2. Due to greater variety in curricula offering, enrollment increases, and therefore the high school becomes more and more the people's college.
3. It affords equal opportunity. In the past high school training has been devoted to college preparatory.
4. Vocational training in the high school will not conflict with the trade school, since the latter does not get all of those who leave high school and go to work. The trade school is for the purpose of upgrading those who are already in the trade.
5. Everyone is striving for a more homogeneous society. This will be possible where the boy who works with his hands gets his training beside the one training for other work.

You may be curious to know whether or not there is any advantage in having the junior and senior high schools together in the same building. So far as I can determine, there is no advantage. I should not say that no advantage exists, because I can think of one, which is the use in common of the shop equipment, and instructor. However, I do not deem this a valid argument in all instances. For instance, where the enrollment is sufficiently large to warrant the exclusive use of the shop to one unit, the other must of necessity be excluded. And, where the time is pro rated, both units suffer accordingly. Again the instructor who teaches both junior and senior high school students is called upon to lead a double roll, or serve in a dual capacity so to speak. Why? For the reason that students of the junior high school demand and require consideration of a different nature than do those of the senior high school. The sympathetic and encouraging acts of the junior high teacher are too much an essential part of the environment to be dispensed with to any advantage.

I will now say, as the man said when coming out of the water after having had a swim: "I am drawing near my clothes." But, before I do so, there is another matter that requires some consideration. This question concerns every instructor of printing whether he be in the junior high, senior high, or trade school. It is of vital importance, and some means of coping with the situation is necessary. My question is: Do we dare shrink from assuming the burden of production work in the school print shop? Furthermore, is it a burden? My theory is that work of this nature is as much a part of the school print shop as the right to destroy is a part of the right to tax. Of course, if it becomes a burden, which is probable, it becomes detrimental. Since production work is one of the obligations assumed by the school printing department, the only solution is to organize the course of instruction accordingly. Have you mastered the situation? How?

In closing, let me quote a few appropriate words the principle of which I think is applicable, and were written by that eminent jurist, Chief Justice Marshall, wherein he said: "Let the end be legitimate, let it be within the scope of the constitution, and all means which are appropriate, which are plainly adapted to that end, which are not prohibited, but consistent with the letter and spirit of the constitution, are constitutional."

Harmonizing Paper With Typography, Procesess, and Purpose

ARNETT W. LESLIE
Vice-President Leslie Paper Company
Minneapolis, Minnesota

YOU are instructors in printing. It is, therefore, fair for me to suppose that you are constantly adding to your store of knowledge technical information in the field of the graphic arts. It has been suggested that perhaps I might add a little technical information in the field of paper, particularly from the point of view of the printer.

It must be obvious, in theory at least, that every article of manufacture is a combination of certain characteristics put together from a larger or smaller number of raw materials and in varying proportions always with the final objective in view.

Perhaps too many of us are, in our hurry to "get the job done," inclined to overlook these facts with the result that frequently the best paper for the purpose is not selected.

A few of the outstanding characteristics possessed by paper, which

it is quite essential that the printer take into account in planning his completed job, are these: size, weight, bulk, texture, color, folding quality, non-curling quality, rigidity, grain direction, non-linting, and pastability. Not that these are the only characteristics, but they are a few of the more outstanding and important ones.

Almost every one of these characteristics requires, on the part of the manufacturer, a study of all the raw materials; outstanding among which, are the pulps to be used.

First, there are the pulps made from virgin materials, the least expensive of which are the wood pulps.

Mechanical or groundwood pulp, the least expensive of virgin pulps, is to be found in cheaper papers such as newsprint and groundwood book papers. Always with groundwood is to be found sulphite pulp. The fibre of sulphite pulp is longer and, therefore, adds the element of strength to the sheet composed of groundwood and sulphite.

In the field of wrapping papers, we find sulphate wood pulp. This pulp, also, is coming into use in printing papers by means of a bleaching process which gives it a cream or white color.

Then, there is soda pulp—a soda ash process producing from wood chips a pulp which is soft and very valuable as a filler in certain types of book paper.

The higher grade papers contain a percentage or are entirely made from pulp made from rags. There are, of course, a great variety of qualities of rags, the finest, all rag papers being made from new, white rags.

Then, there is a great miscellaneous supply of other materials for the making of paper pulp, namely, old ropes, old newspapers, old magazines, flax straw, cornstalks, etc.

The manufacturer has available several types of paper making machines to say nothing of mechanical equipment in the pulp making process in great variety.

This is not the place to go into the details of paper manufacture. In mentioning pulps and machinery, it is only for the purpose of suggesting what a great number of combinations may be the result of so wide a variety of raw materials and mechanical equipment.

Now, to return to some of the characteristics which I have mentioned. I will just suggest some of the things which the printer should have in mind, and I hope you will understand that these suggestions do not in the least pretend to be a thorough and complete analysis of the subject. They are merely suggestions and offered for the purpose of arousing the imagination and the alertness of the printer's mind when planning printed pieces.

Let us consider weight. In selecting the weight of the paper to be used in a booklet or book job, we must consider the nature of the

printed matter to be put on the paper. For example, if heavy cuts either line or halftone are to be used, the paper should be of sufficient weight to give that very desirable characteristic not named above—opacity. That is, there should be no interference on the part of the printing of one side of the paper with that of the other.

As to size—the standard sizes in the various classes of paper should be taken into account in planning the printed pieces. If a book or job is originally designed to be cut from book paper sizes and for some reason or other is changed to a bond paper or cardboard size, it may be necesary to change the size of the entire job.

The question of bulk is often very important. If a thin book should appear heavier and thicker, the right stock must be selected to obtain this result. If a book contains many pages, bulky book paper would undoubtedly make it cumbersome and difficult to handle. Therefore, a paper of less bulk, but perhaps of the same weight, might well be selected. (Demonstration of samples.)

Texture—You are well aware of the fact that there is great variation in texture of papers. Some are soft, pliable, pleasant to the touch, while others are harsh, toothy, and if well used, expressive of suggestions which may be desirable in the printed piece.

Color—But a wide variety of colors are now available to us as users of paper. We have come to regard certain colors as Spring colors—others as Autumn and Winter colors. (Demonstration.)

For a folder of any sort, the folding quality of the paper must be taken into account, particularly if it is coated book paper. Coated book paper is simply plain paper with a layer of materials adhering to one or both surfaces intended to give a smoother, higher finish for the reproduction of fine halftone. This surface is largely clay. If the body stock is not sufficiently strong to carry the clay when the paper is folded, there will be a cracking either in the surface of the paper or in the sheet itself, resulting in an almost useless piece of printed matter. The foldability of a sheet should be particularly assured for complicated folds.

In speaking of folding, we should not overlook the folding of bristol boards and cover papers. Oftentimes an otherwise beautiful job is spoiled by careless and improper folding of thick papers. A special brass rule with special preparation on the platten of the press should be used to properly score bristol boards, double thick cover papers, and other heavy papers before folding. (Demonstration of brass rule and distribution of booklets on creasing and folding.)

Non-curling—The non-curling feature is essential in several papers, particularly gummed papers, cardboards, and blanks used for display cards and bond papers which are to be lithographed.

It may be interesting to you to know that after gummed paper is given its coating of gum, it is passed over sharp, steel blades at forty-

five degree angles so as to break the gummed surface into millions of minute particles. The continuity of the gummed surface being thus broken, the tendency to curl is very much minimized.

Coated one side cardboards and blanks are very apt to curl for the reason that the co-efficient of expansion is different between the coated side and uncoated side. Therefore, on jobs using this material where the board is apt to curl under difficult circumstances, a coated two side sheet should be used.

In the lithographic offset process, the paper is dampened. If the paper is not correctly made, this process is apt to cause a curl in the paper very much reducing the rate of production on the press.

Rigidity is particularly desirable in bristol boards and cardboards.

Grain direction in cardboards and bristols is closely related to rigidity for there is somewhat more rigidity in the direction of the grain than against it.

Grain direction is also important in the handling of book paper for books or booklet folders, and other advertising pieces. The difficult folds should always be with the grain unless proper scoring can be done.

The non-linting characteristic is essential in offset papers. If the paper has not this characteristic, but is inclined to give off small particles, these small particles will soon clog up the plates, get into the ink, and ultimately ruin the job.

Pastability is essential in papers used for the covering of books, boxes, and other material.

Finish—Here we have a great variety of characteristics available. Finishes of various kinds are put on the paper either on the machine itself or as special finishes applied in the calender or in the plater.

Very coarse finishes should not be used where small type is essential. The finish should always be considered so that it will harmonize with the objective of the printed piece.

Permanence is an essential characteristic in preparing certain records which must be preserved for an indefinite period. All rag stock is essential in obtaining this characteristic.

Durability is highly desirable in many different types of printed matter, notably, direct mail pieces mailed without envelope, permanent records on indexed cards, written or machine made records in books or files which undergo a great deal of handling.

I have endeavored to give you just a summary which will perhaps be an eye opener for some. The various examples here displayed will illustrate most of these characteristics.









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grades - through
the high school
use
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CRAYOLA Wax Crayon — the best medium for kindergarten and primary grades.

PERMA Pressed Crayon — for fine lines and velvety tonal textures.

ARTISTA Water Colors-clean, true colors, which mix easily.

ARTISTA Tempera Show Card Colors-creamy poster paint.

Binney & Smith Co.

41 East 42nd Street New York.

SOCIAL EVENTS

After the first general session those present adjourned to the Ball Room of the Curtis Hotel where the members of the "Ship's Crew," from Captain down, were waiting to give the hand of welcome. Paper hats, balloons and noise-making devices added to the merriment and the music of a splendid orchestra made it impossible for some to keep off the floor. This, the first informal get-together event staged by our Association, was certainly successful. Undoubtedly, it will be repeated at succeeding conventions.

On Thursday evening the Dinner and Dance occupied the program. The banquet hall was cleverly decorated with murals made by the pupils in the Art Department of the Minneapolis schools. They not alone formed a background for the gala occasion, but each section contained puzzle features which kept busy some of those who did not care to dance. The splendid dinner at such a low cost, plus excellent music for those who wished to dance, put this social event in the front ranks of Dinner and Dance events.

EXHIBITS

Twenty-nine booths for material and equipment exhibits were arranged in the first floor lobby of the Leamington Hotel. These were occupied by the following firms:

The Manual Arts Press	The Mentzer, Bush Company
Eberhard Faber Pencil Company	The Favor, Ruhl Company
Esterbrook Steel Pen Company	Lester Griswold
P. P. Caproni & Brother	The School Arts Magazine
The Dudley Lock Corporation	The Practical Drawing Company
The Bruce Publishing Company	Joseph Dixon Crucible Company
H. A. Rogers Company	The Stanley Rule & Level Plant
The Waldcraft Company	F. A. Owen Publishing Company
Thomas Charles Company	Keramic Studio Publishing Co.
The Braden Sutphin Ink Co.	Binney & Smith Company
A. B. Dick Company	The Prang Company
Art Extension Press	E. T. Shima
The American Crayon Company	Henry Disston & Sons
The Frederick Post Company	Devoe & Raynolds Company, Inc.

Forty booths of school exhibits also were placed on the first floor of the Leamington Hotel.

BUSINESS SESSIONS

At the first general session President McCloskey called the meeting into a short business session. The following nominations were made from the floor for members to nominate officers for the coming year: Ruth Raymond, Florence Fitch, Estelle Hayden, Grace Baker, George Dutch and F. G. Curtis. Election was held by ballot and the following receiving a majority vote, were elected: Ruth Raymond, Florence Fitch, and George S. Dutch.

The President instructed this committee to be ready to report at the business meeting May 9th.

The President appointed the following Committee on Resolutions: A. G. Pelikan, Lillian Weyl, and Elmer Christy.

At the general session Friday, May 9th, President McCloskey called the meeting into business session at which time reports, some of them verbal, were made by the Secretary-Treasurer, the Council, Program Committee, Exhibit Committee, Federated Council on Art Education, Resolutions Committee and the Nominating Committee.

Following these reports the Secretary read the following proposed amendments to the Constitution and By-Laws, copies of which had been mailed to all members of the Association in February:

PRESENT CONSTITUTION

Article VI, Section 4. Editorial Board. There shall be an Editorial Board of three members, with a term of service of three years, one member to be appointed by the President each year. The senior member shall act as Chairman unless otherwise designated by the President.

PRESENT BY-LAWS

Article III, Section 4. Local Expenses. All necessary local expenses, including those involved in the housing, placing, and reshipping of exhibits, in engaging halls for meetings and necessary service, etc., shall be guaranteed by the city or organization inviting the Association for its annual meeting.

PROPOSED AMENDMENTS

Article VI, Section 4. Editorial Board. There shall be an Editorial Board of three members, one of whom shall be the Secretary, one the outgoing President and the other the President of the preceding year, the Secretary to act as chairman.

Article III, Section 4. Local Expenses. All necessary local expenses including those involved in the housing, placing and reshipping of exhibits, in engaging halls for meetings and necessary services, etc., shall be guaranteed by the city or organization inviting the Association for its annual meeting, but the Association by Council action may at the time of accepting the invitation agree to pay a given amount toward the expense if conditions warrant such an expenditure. By vote, the Association accepted the amendments and the Constitution and By-Laws as printed in this bulletin include these amendments.

Before the meeting adjourned, the Ship conducted the distribution of prizes. The following persons were fortunate in the drawing and were present to receive prizes donated by the material and equipment exhibitors:

Caroline R. Mower, Eveleth, Minnesota.
E. Allen, St. Paul, Minnesota.
Edna Ackerknecht, Chippewa Falls, Wisconsin.
Elizabeth Clemens, Menomonie, Wisconsin.
Laura L. Stoddard, Highland Park, Illinois.
Lottie Higgins, Des Moines, Iowa.
Elsie F. Larson, River Forest, Illinois.
Edith Stocker, Muscatine, Iowa.
Gertrude West, Ankeny, Iowa.
Robert Van Sickle, Ann Arbor, Michigan.
Marie Fosmoe, Grand Haven, Michigan.
Elizabeth A. Freely, St. Paul, Minnesota.
George S. Dutch, Nashville, Tennessee.
Ruth Gibson, Northfield, Minnesota.
Thelma Whaley, Austin, Texas.
Florence B. Macdonald, Lafayette, Indiana.
Katherine Cardwell, Kansas City, Missouri.
Marguerita B. Shoedrack, Ames, Iowa.
Edwin L. Olson, Minneapolis, Minnesota.
Edith A. Stevens, Minneapolis, Minnesota.
Florine M. Barrett, Flint, Michigan.
Anita Gundlach, Menomonie, Wisconsin.
Myrtle Carroll, Omaha, Nebraska.
Laura Wentworth, Omaha, Nebraska.
Edna Carlsten, Stevens Point, Michigan.
Mattie L. Jarrott, Oklahoma City, Oklahoma.
Augusta H. Knight, Omaha, Nebraska.

Bess Eleanor Foster, Minneapolis, Minnesota.
Alma Rosenberger, Faribault, Minnesota.
Myrtle DeGraff, Omaha, Nebraska.
Sister Maureen, O. P., Springfield, Illinois.

Other names drawn, but failing to receive prizes because they were not present:

Katheryn Sikking, Louisville, Kentucky.
Ethelyn J. Bros, Minneapolis, Minnesota.
Edith Jordan, Jacksonville, Illinois.
Laura Erf, Minneapolis, Minnesota.
Frances Loverin, St. Paul, Minnesota.
Anna Snyder, Plattsmouth, Nebraska.
Alice F. Nesmith, Kansas City, Missouri.
H. H. Raymond, Minneapolis, Minnesota.
Myra A. Goode, Minneapolis, Minnesota.
Jean Wolcott, Des Moines, Iowa.
Mamie E. Slack, Keokuk, Iowa.

The meeting adjourned at 4:00 P. M. to meet again in Louisville, Kentucky, April 28th, 29th, 30th and May 1st.

REPORTS

Report of the Secretary

Members of the Association:

Your Secretary wishes to report that he has handled approximately 5,000 letters during the year covering general correspondence, solicitation of dues, acknowledgment of dues, promoting sale of Year Books, securing advertising for bulletins and selling convention exhibit space to material and equipment exhibitors. To simplify the work of the Secretary's office and also to cut down expenses, some of the letters were multigraphed but at least 50 per cent of the correspondence has been personal.

As will be seen by the Treasurer's Report, the material and equipment firms responded well to the call of the Secretary and all but one of the available booths were sold. This one was used to display the prizes offered by the exhibitors.

The Secretary made one trip to Minneapolis prior to the annual meeting to assist the local committees in making arrangements for the convention.

He attended all Council meetings and kept minutes of all Council transactions. (These minutes are printed as a part of the Council report.)

The Secretary has prepared for publication, addressed and mailed six bulletins during the year and has partly financed the cost through advertising. While the general business depression has influenced the income for sales of advertising and exhibit space, economies practiced have reduced the operating expenses of the organization and at the close of the fiscal year the assets of the Association show a gain of $349.75 over the preceding year.

Respectfully submitted,

HARRY E. WOOD.

Resolution

WHEREAS, The city of Minneapolis, through its various organizations has provided a most successful setting for the Thirty-sixth Annual Convention of the Western Arts Association, and

WHEREAS, The Local Executive Committee and other assisting committees have worked hard and faithfully to make this convention a success, and

WHEREAS, The P. T. A., through their council, made all arrangements and furnished cars for the splendid trip of the lakes and boulevards, and

WHEREAS, Parent-Teacher groups and members of the Superintendent's staff made available automobiles for the purpose of conveying visitors to and from schools, and

WHEREAS, The Art Department of the University of Minnesota made it possible for the members of the W. A. A. to visit the University and to attend there a most unusual lecture by Herr Hoffman of Munich, and,

WHEREAS, Minneapolis Institute of Art extended the courtesy of a special evening visit to the Institute, and the use of their attractive auditorium, and

WHEREAS, The members of the Ship in their usual competent manner did much to help in the conviviality of the convention, and

WHEREAS, The banquet with its original decorations and its amusing entertainment was made possible through the efficient work of the Local Committee, and

WHEREAS, The Leamington Hotel made special arrangements to house the school and industrial exhibits to the best advantage of the delegates, and also co-operated generously in every way,

BE IT RESOLVED, That we hereby record unanimously our appreciation to all those who have given unstintingly of their time and effort, and who are entitled to the most sincere thanks from the members of the Western Arts Association.

(Signed)
A. G. PELIKAN, *Chairman*
LILLIAN WEYL
ELMER CHRISTY
Committee on Resolutions

Nominating Committee

After due deliberation, the nominating committee, elected to recommend officers for the W. A. A. for the ensuing year submit the following report:

For Auditor—Mrs. Lenore Eldred, Birmingham, Alabama.
For Vice-President—Mr. Charles H. Bailey,
Cedar Falls, Iowa.
For President—Miss Lillian Weyl, Kansas City, Missouri.
For Member of the Council—Mr. J. H. McCloskey,
Lakewood, Ohio.

The constitution and by-laws provide that appointment to membership on the Council shall be on the basis of past meritorious service rendered the Association. The last named above has been suggested as a member of the Council because of faithful and efficient service of long standing in the Association.

(Signed) RUTH RAYMOND, *Chairman*
FLORENCE H. FITCH
GEORGE S. DUTCH.

Treasurer's Report for the Fiscal Year

September 1, 1929, to September 1, 1930

DISBURSEMENTS

Program	$ 954.72
Secretary's Office	409.13
President's Office	68.95
Editorial Board	176.00
Exhibit Committee	115.41
Publications	1,921.91
Membership Promotion	78.82
Advertising	37.95
Miscellaneous	102.10
Convention	596.94
Secretary's Salary	500.00
Total Disbursements	$4,961.93
Balance in bank September 1, 1930	2,017.17
Funds at Interest September 1, 1930	1,500.00
Total	$8,479.10

RECEIPTS

761 Members—Dues	$ 761.00	
Bulletin Subscriptions	761.00	
92 Student Members	92.00	
Advertising	850.35	
Sale of Year Books	36.00	
Sale of Membership Lists	9.00	
Material and Equipment Exhibits	2,645.00	
Miscellaneous	157.33	
Total receipts	$5,311.68	
Balance in bank September 1, 1929	1,667.42	
Funds at Interest September 1, 1929	1,500.00	
		$8,479.10
Total assets September 1, 1930	$3,517.17	
Gain in assets since September 1929	$ 349.75	

REPORT OF AUDITOR

The books of the Treasurer were submitted for audit and they bear the signature of Effie Schuneman, auditor, showing the accounts to be correct as published.

Report of the Council

Your Council held six meetings in Minneapolis and in each case every member was present. Mr. J. H. McCloskey acted as proxy for Mr. Frank Stanton. The work of the Council was expedited and systematized by a collection of information and data which Secretary Wood put into the hands of each member on the first day.

A very important action by Council was the decision to publish in the annual record the minutes of its meetings, thus bringing to the members the details of the association's business relations. This action obviates the necessity of a detailed report by the chairman of the Council.

There remains for the chairman only the opportunity to express his deep appreciation of the loyal support of the committee members, who gave so freely of their talents during practically all of the time not devoted to program meetings.

ELMER W. CHRISTY,
Chairman, Council of Western Arts Association.

Minutes of Council Meetings

MAY 6th, 1930

A meeting of the Council was held May 6th, 1930, in the Leamington Hotel, Minneapolis, Minnesota. The meeting was called to order at 9:30 A. M. by Mr. Elmer Christy, Chairman. Those present were the Misses Scovel and Cantrall, and Messrs. McCloskey, Opie, Dutch, Christy and Wood. Mr. Stanton was absent but had appointed Mr. McCloskey as proxy.

Minutes of the April 30th, May 1st, 2nd and 3rd, 1929, meetings were read and approved.

(1) A motion to pay the Federated Art Council dues of $30.00 was made by Miss Cantrall, seconded by Mr. Opie and passed. There was discussion on the future relation of the Western Arts Association to the Federated Art Council due to the withdrawal of support of that Council by the Carnegie Foundation. No action was taken.

(2) The matter of furnishing addressograph service and mailing lists of the Western Arts Association membership was discussed and on motion of Miss Scovel, seconded by Mr. Dutch, it was voted to make a flat charge of $10.00 to such persons or firms as ask for this service.

(3) The matter of membership in the Association was discussed quite at length, reference being made to many letters and diagrams showing the status of membership at present and the efforts which have been made to increase membership. It was voted on motion of

Miss Scovel, seconded by Mr. Opie that a membership committee of two be appointed by the Chairman to work out some plan for establishing a membership committee at large to promote the increase of membership. The Chairman appointed Mr. Dutch and Miss Cantrall to this task.

(4) A letter from Mr. Vogel expressing his regret at not being able to attend the convention was read and the Council authorized the Secretary to write a letter to Mr. Vogel expressing appreciation of his past service to the Association and regret at his absence.

(5) Attention was called to the fact that Miss Hazel P. Roach, Chairman of the Home Economics Section, was unable to attend the convention because of the death of her father. The Secretary was asked to send a letter of sympathy to Miss Roach.

Meeting adjourned at 12:00 o'clock noon to reconvene at 8:00 A. M., May 7th.

MAY 7th, 1930

The meeting was called to order at 8:30 A. M. by Mr. Christy, Chairman. Those present were the Misses Scovel and Cantrall, and Messrs. McCloskey, Opie, Dutch, Christy and Wood.

The Council proceeded with new business as follows:

(6) The place of meeting for the 1931 convention was discussed and various invitations considered. Representatives from Louisville were given audience. After their withdrawal and after further discussion, it was voted on the motion of Mr. Dutch, seconded by Mr. Opie, to hold the 1931 convention in Louisville with the Brown Hotel as headquarters.

Meeting adjourned at 9:30 to reconvene at 7:30 A. M., May 8th.

MAY 8th, 1930

The meeting was called to order at 7:40 A. M. by Mr. Christy, Chairman. Those present were the Misses Scovel and Cantrall, and Messrs. McCloskey, Opie, Dutch, Christy and Wood.

(7) The time for the next convention was discussed and upon motion of Mr. Dutch, seconded by Miss Scovel, it was voted to open the convention on April 28th and continue through the 29th, 30th and May 1st.

(8) More discussion was held on the problem of membership but no definite action taken.

(9) Attention was called to the fact that it is difficult to have Bulletin No. 5 (Membership Bulletin) reach all members because the mailing date, July 15th, comes at a time when most members were away from their permanent address. It was decided to ask the Post Office Department to permit a change in the mailing date of the July 15th Bulletin to December 1st and to make the December 1st Bulletin a General Information Bulletin. It was also voted upon

motion of Miss Cantrall, seconded by Mr. Opie, that the Member-Ship List should be included with the copy of the proceedings and that a reprint of 100 copies be made of the membership list alone.

(10) It was decided by vote on motion of Miss Scovel, seconded by Mr. Dutch, that the minutes of the Council meetings be included in the copy of the proceedings.

The meeting adjourned at 9:30 o'clock to reconvene at 11:45 A. M.

MAY 8th, 1930

The meeting was called to order at 11:45 A. M. by Mr. Christy, Chairman. Those present were the Misses Scovel and Cantrall, and Messrs. McCloskey, Opie, Dutch, Christy and Wood.

(11) Due to the fact that facilities at the Secretary's office were inadequate, it was agreed by consent that the Council accept the offer of Mr. Dutch to use Peabody College as a repository for back numbers of the Year Books of the Association. The Secretary was authorized to retain a maximum of 25 copies at his office.

(12) Due to the fact that it is always quite necessary that the Chairman of the Council be present at the annual meeting, the matter of payment of traveling expenses including railroad fare, meals on train and Pullman service and also hotel room, was discussed. Upon motion of Mr. Dutch, seconded by Miss Scovel, it was voted to cover such expenditure and to make the order retroactive for this year.

(13) Because of some criticism of the overlapping of Section meetings at the last two conventions, the Secretary was authorized to make a new program schedule and submit it to the Council for approval.

The meeting adjourned at 1:30 o'clock to reconvene at 8:00 A. M., May 9th.

MAY 9th, 1930

The meeting was called to order at 8:00 A. M. by Mr. Christy, Chairman. Those present were the Misses Scovel and Cantrall, and Messrs. McCloskey, Opie, Dutch, Christy and Wood.

(14) A member of the Nominating Committee recommended to the Council that in order to make our Association more democratic no one should be permitted to serve on the Nominating Committee who had served in that capacity during the three preceding years. It was agreed by consent that the Secretary call this matter to the attention of the President at the time of the business meeting in order that he might present the matter when asking for nominations for the committee.

(15) On motion of Miss Cantrall, seconded by Mr. Dutch, Miss Foster was reappointed to succeed herself as a member of the Fed-

erated Council on Art Education, her new term to expire May 1st, 1933. The motion included reappointment of Miss Ruth Raymond as alternate for Miss Foster for the same period of time.

(16) Miss Cantrall reported for the membership committee appointed at the first meeting. Further discussion concerning a permanent membership committee resulted in a motion by Mr. Dutch, seconded by Miss Scovel, that Mr. William H. Vogel, Director of Art, Cincinnati, Ohio, be made Chairman of a standing Membership Committee and the Council so voted.

(17) After much discussion on a budget for the coming year, the following budget was approved:

RECEIPTS

Membership	$2,000.00
Student Members	60.00
Advertising	1,000.00
Sale of Reports	40.00
Membership Lists	5.00
Equipment Exhibits	2,200.00
Miscellaneous	
Interest	60.00
	$5,365.00

DISBURSEMENTS

Program	$1,200.00
Secretary's Office	565.00
President's Office	100.00
Editorial Board	200.00
Exhibit Committee	100.00
Publication	1,800.00
Membership Promotion	150.00
Council	150.00
Miscellaneous	150.00
Secretary's Salary	500.00
Convention	450.00
	$5,365.00

Meeting adjourned at 10:00 o'clock to meet at the close of the afternoon session.

MAY 9th, 1930

The meeting was called to order at 4:30 P. M. by Mr. Christy, Chairman. Those present were the Misses Scovel and Cantrall,

Messrs. McCloskey, Opie, Dutch, Christy and Wood, and also Miss Lillian Weyl, President-elect.

(18) On motion made by Miss Scovel, seconded by Mr. Dutch, Miss Cantrall was made Chairman of the Council for the year 1930-31.

(19) Mr. Wood was reappointed Secretary upon motion of Miss Scovel, seconded by Mr. McCloskey. Due to the desire of the Council members to clear up all matters of business prior to the convention, the date of the next Council meeting was set for Monday afternoon, April 28th, 1931.

The meeting adjourned sine die at 5:00 P. M.

HARRY E. WOOD, *Secretary.*

Eberhard Faber Pencil Company

MONGOL COLORED INDELIBLE
« « PENCIL « «

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For tuition at the finest Art Schools in the United States and Europe.

FIRST PRIZE: Tuition for two years. One year at Art Institute, Chicago, Illinois; or California School of Arts and Crafts, Oakland, California; or New York School of Fine and Applied Art (Parsons') New York City; or Pratt Institute, Brooklyn, New York (choice optional with the winner).

Upon the successful completion of the first year and on the recommendation of the teachers of the school attended, the second will then be granted at Kuntsgewerbeschule in Vienna. The second year, in addition to the tuition, $300 in cash will be given for expenses.

SECOND PRIZE: $200 toward payment of one year's tuition at any of the above American art schools.

THIRD PRIZE: Cash $75.

FOURTH PRIZE: Cash $25.

All drawings must be rendered with Mongol Colored Indelible Pencils. Samples furnished gratis on request.

Contest open to all High School students.

All drawings must be original.

Drawings are to be shipped flat addressed to Eberhard Faber Pencil Company, Scholarship Department, 37 Greenpoint Avenue, Brooklyn, New York and must be mailed by January 31, 1931.

If drawings are to be returned sufficient stamps to cover postage must accompany drawings. While every care will be taken to see that returned drawings are properly packed, Eberhard Faber Pencil Company cannot be responsible in case of loss or damage.

One of the following sizes may be chosen: 6" x 9", 9" x 12", 12" x 18", 18" x 22".

Prize winning drawings and the fifty receiving honorable mention will become the property of Eberhard Faber Pencil Company.

Further information sent on request. Write Eberhard Faber Pencil Company, 37 Greenpoint Avenue, Brooklyn, N. Y.

Constitution and By-Laws of the Western Arts Association



CONSTITUTION

Article I—NAME

The name of this Association shall be the Western Arts Association, and its object shall be the advancement of the teaching of art, manual training, household arts, and allied subjects in schools, and particularly in public schools.

Article II—MEMBERSHIP

All interested in education are eligible to membership in this Association.

Article III—OFFICERS

Section 1. The officers of this Association shall consist of a President, Vice President, Secretary-Treasurer, and Auditor.

Section 2. All officers, except the Secretary-Treasurer, shall be elected each year by a majority ballot of the Association. Nominations of officers shall be by a committee of three nominated from the floor and elected by ballot.

Section 3. The Secretary-Treasurer shall be appointed by the Council, as hereinafter provided.

Article IV—MEETINGS

The Annual Meeting shall be held at such time and place as may be determined by a vote of the Council.

Article V—QUORUM

A quorum for the transaction of business shall consist of twelve members.

Article VI—STANDING COMMITTEES

Section 1. *Council.* The affairs of the Association shall be managed by a board of eight (8) Directors, chosen from its members, which shall be called "The Council." The Council shall consist of six members, to be elected as hereinafter provided, and the President and Secretary-Treasurer, ex-officio.

At each annual business meeting of the Association one member

of the Council shall be elected for a term of five years, upon the recommendation of the Committee on Nominations.

The report of the Committee on Nominations shall specify the ground in service to the Association, upon which such recommendation is based. No member of the Association shall be eligible to hold office in the Association who has not been a member, in good standing, in the Association for at least three years prior to his election.

Section 2. *Program Committee.* There shall be a Program Committee of four members, consisting of the President, Vice President, ex-officio, and two other members appointed each year by the President, one of whom shall be designated as Chairman, and one of whom shall be a resident of the city entertaining the convention.

Section 3. *Exhibit Committee.* There shall be an Exhibit Committee of four members, with a term of service of two years, two members resident in the city which is to entertain the convention, to be appointed each year by the President, who shall also designate a Chairman.

Section 4. *Editorial Board.* There shall be an Editorial Board of three members, one of whom shall be the Secretary, one the outgoing President and the other the President of the preceding year, the Secretary to act as chairman.

ARTICLE VII—AMENDMENTS

Amendments to this Constitution may be made at any regular meeting by a two-thirds (2-3) vote of those present, provided notice of the proposed change shall have been given to each member at least three months previous to the meeting at which this vote is taken.

By-Laws

ARTICLE I—DUTIES OF OFFICERS

Section 1. *The President* shall preside at all meetings and serve as an ex-officio member of the Council and of all other committees. It shall also be the duty of the President, with the concurrence of the Council, to make all appointments and fill all vacancies.

He shall keep in touch with the Local Committees in charge of the reception and entertainment of the Association at the place of meeting, and make such suggestions as he deems wise in regard to the management of the meeting, and in general direct the affairs of the Association during his term of office.

He shall consider all bills of expense incurred by the various committees before authorizing their presentation to the Secretary-Treasurer for payment. Any expenditure not provided for in the

annual budget must be approved by the Council before authorization by the President for payment.

All checks presented for the payment of bills must be countersigned by the President before being issued.

Section 2. *The Vice President* shall serve as ex-officio member of the Program Committee. In case of the absence of the President, the duties of that office shall devolve upon the Vice President, during the period of such absence.

Section 3. *The Secretary-Treasurer* shall keep complete and accurate minutes of all meetings of the Association and of the Council, and upon their approval, by the Council, shall enter the same in the books of record kept for the purpose. He shall keep the roster of members with addresses, enroll new members, and correspond with persons eligible to membership or interested in the work and meetings of the Association, and as far as possible keep lists of the same.

The Secretary-Treasurer, under the supervision of the Council, shall have charge of the books of account of the Association. He shall collect all moneys due the Association, keep account of the same and deposit in a bank in the name of the Western Arts Association. He shall keep account of all bills against the Association and after their approval by the proper officer, shall issue checks for payment of the same, and forward to the President for his signature.

He shall make and collect all bills against the members or others. He shall have charge of all bills against the Association, shall keep an account of the same, and shall present them in proper form to the Council, on demand, for audit. He shall submit his books of account together with vouchers to the Auditor at the close of the fiscal year, September 1.

It shall be the duty of the Secretary-Treasurer to provide a thorough and efficient system of registration, including name, title, and permanent and local address of those in attendance at the annual meetings.

To attend to the printing and distribution of all necessary stationery as directed by the Council.

To provide duplicate copies of minutes, membership lists, addresses, committee reports, etc., for the use of the President and Chairmen of committees as desired, and to furnish them when necessary with memoranda and data in regard to affairs requiring official action.

To prepare and send out bulletins containing such information in regard to the work of the Association as may be authorized or directed by the Council.

To keep a full and accurate record of all work performed in the discharge of his duties, together with an itemized account of expenses,

and upon the approval of the Council, submit the same to the Association at its annual meeting.

To act as custodian of all papers and properties belonging to the Association and keep a list of the same for incorporation in the Annual Report.

The necessary expenses of the Secretary-Treasurer incurred in attending the annual meeting shall be paid out of the funds of the Association upon warrant properly drawn and approved by the Council.

Section 4. *The Secretary-Treasurer* shall be required to give bond in such sum as the Council may direct. It shall be executed by a responsible guaranty company, the expense to be defrayed by the Association.

Section 5. *The Auditor* shall examine the final reports of the Secretary-Treasurer, Chairmen of the Standing Committees, and their books and vouchers after the close of the fiscal year—September first—and report upon the same to the Council in time for publication in the Annual Report of the Association.

The Auditor may, if it seems necessary, employ the services of a certified public accountant to assist in auditing the accounts of the various officers and committees as herein provided, and charge the same to the Association, the bill to be approved by the Council.

ARTICLE II—DUTIES OF STANDING COMMITTEES

Section 1. All bills incurred by any committee for expenses shall be approved by the Chairman of that Committee and submitted to the President for approval. Bills for expenditures not provided for in the annual budget must be submitted by the President to the Council for consideration.

Section 2. *The Council* shall hold one meeting immediately preceding and one meeting immediately following the Annual Convention of the Association and such other meetings as may be deemed appropriate. If a Council member shall find it impossible to be present at any Council meeting he shall appoint some member of the Association who will attend such meeting to act as his proxy for that meeting and so advise the Secretary in writing.

Four members (or their proxies), of whom three shall be elected members, shall constitute a quorum for the transaction of business.

The Council shall, at its first meeting after adjournment of the Annual Convention, elect a chairman, and appoint an active member to serve as Secretary-Treasurer of the Association and of the Council for one year, or until his successor is elected. The Council may, for cause, declare the office of Secretary-Treasurer vacant, and make a new appointment at any time.

The Council shall receive and consider all appointments and resignations, the Secretary's minutes, reports of the Secretary-Treasurer and Chairmen of Standing Committees, also any other matters which have been referred to it. It shall also consider the final reports of the Auditor, Secretary-Treasurer, and Chairmen of Standing Committees before authorizing their publication in the Annual Report of the Association.

It shall consider all bills for expenditures not provided for in the annual budget before authorizing their payment.

It shall furnish to the Secretary-Treasurer immediately after the annual meeting, the list of officers and committees for the year for incorporation in the Annual Report of the Association. It shall also furnish to the Secretary-Treasurer from time to time during the year, such announcements in regard to the work of the year as it deems desirable for incorporation in the official bulletins to be mailed to members.

It shall authorize the issuing of all bulletins, announcements, etc., relating to the general work of the Association and its annual meeting, and, in general, co-operate with the President in exercising such supervision over its affairs as may be necessary to insure satisfactory results.

It shall keep a record of its proceedings, including expenses incurred in the discharge of its duties, and report the same to the Association at its annual meeting, together with such suggestions and recommendations as may be deemed desirable.

It shall prepare, for presentation at the annual business meeting, a report of the financial condition of the Association for the past year, and shall also present therewith a detailed estimate of the probable income and expenditures for the following twelve months.

It shall determine, for the guidance of the officers and standing committees, when not otherwise provided by specific appropriation by the Association, the sums of money to be available for the work of such committees.

Section 3. *The Program Committee* shall engage lecturers and speakers and have entire charge of the program for the annual meeting. In consultation with the President and the Local Committee of the city where the meeting is to be held, it may make such arrangements for service, entertainment, and publicity as it deems necessary for the success of the meeting.

At least one day previous to the annual business session the Program Committee shall report to the Secretary-Treasurer all bills of expense connected with the current meeting.

Section 4. *The Exhibit Committee* shall have entire charge of

all exhibits, both educational and commercial, in connection with the annual meetings of the Association.

It shall, at the beginning of the school year, invite representatives of schools or school systems to send exhibits of art, manual training, and other forms of industrial work. It may also invite commercial exhibitors to send exhibits at a reasonable charge for space, the amount received to be turned into the treasury of the Association.

It shall furnish to those intending to exhibit all necessary directions for arranging, mounting, marking, shipping, installing, etc., and make such arrangements with the Local Exhibit Committee at the place of meetings as will insure the satisfactory placing of exhibits.

Section 5. *The Editorial Board* shall have full charge of the publication of the Annual Reports, collect the manuscripts of lecturers and speakers, reports of discussions and minutes of the annual meetings, and attend to such editing of the same as may seem necessary. With concurrence of the Council, the Editorial Board shall be empowered to make from time to time such changes in the general form and character of the Report as may add to its attractiveness and help to make it valuable to members and others interested in the work of the Association.

It shall keep a full and accurate account of all receipts and expenditures and other items of interest in connection with its work and report the same to the Council at its meetings immediately preceding the annual meeting of the Association, and also at the close of the fiscal year, September first.

ARTICLE III—MEMBERSHIP AND DUES

Section 1. There shall be two classes of membership, active and student.

Section 2.—

(*a*) Active membership shall have all the privileges of membership, including voting at all business meetings.

(*b*) Student membership shall be confined to persons actually enrolled in a regular course for graduation at schools which prepare for work along the lines in which the Association is interested, and shall have the privilege of attendance at all meetings of the Association and receive a copy of the Annual Report Bulletin.

Section 3.—

(*a*) Active members shall pay an annual membership fee of two dollars ($2.00) payable to the Secretary-Treasurer at or before the annual meeting. One dollar of the dues shall entitle each member to the right to vote on all questions before the Association, and such other privileges as belong to active membership. Non-payment of dues for two successive years shall be considered equivalent to resignation.

(*b*) Student members shall pay an annual membership fee of one dollar ($1.00).

Section 4. *Local Expenses.* All necessary local expenses including those involved in the housing, placing and reshipping of exhibits, in engaging halls for meetings and necessary services, etc., shall be guaranteed by the city or organization inviting the Association for its annual meeting, but the Association by Council action may at the time of accepting the invitation agree to pay a given amount toward the expense if conditions warrant such an expenditure.

ARTICLE IV—RESOLUTIONS AND APPROPRIATIONS

Section 1. *Resolutions.* No resolution may be brought before the Association for final action, if any member objects, until it has been referred to the Committee on Resolutions, which shall report on all resolutions received by it for recommendations.

Section 2. *Appropriations.* No motion involving appropriation of funds from the treasury may be brought before the Association for final action until it has been referred to the Council for recommendations.

ARTICLE V—ORDER OF BUSINESS

The order of business at the annual meeting shall be as follows:

1. Election of Committee on Nominations.
2. Appointment of Committee on Resolutions.
3. Preliminary Report of Secretary-Treasurer.
4. Reports of Program Committee, Exhibit Committee, Editorial Board, Council.
5. Reports of Special Committees.
6. Report of Nominating Committee.
7. Election of Officers.
8. Unfinished Business.
9. New Business.
10. Adjournment.

ARTICLE VI—AMENDMENTS

These By-Laws may be amended at any regular meeting by a two-thirds (2-3) vote, provided notice has been given at a previous meeting of the current session or without previous notice, by a unanimous vote of the members present.

Membership List

The following list shows members having paid 1929-30 dues prior to September 1, 1930. Many have sent in their dues since that date but too late to permit printing their names in this list. This list does not include 875 members who belonged during the years 1927-28 and 1928-29.

It is very difficult to keep the mailing addresses up to date unless members notify the Secretary of changes in address.

Corrections in name, title or address should be sent to the Secretary, Harry E. Wood, 5215 College Avenue, Indianapolis, Indiana.

—A—

Abbott, L. R., Director of Manual Training and Industrial Education, 234 Division Avenue, North, Grand Rapids, Michigan.
Abell, Claudia V., Art Instructor, Elgin High School, Elgin, Illinois.
Ackernecht, Edna, Art Teacher, 38 East Birch Street, Waukesha, Wisconsin.
Adams, Orel L., Director of Art, 602 Parsells Avenue, Rochester, New York.
Alexander, Hazel V., Assistant Supervisor Home Economics, 657 Barbee Way, North, Louisville, Kentucky.
Allen, Eline D., Art Teacher, 671 East Wheelock Parkway, St. Paul, Minnesota.
Allen, Harriet, Teacher of Art, 312 South Garfield, Burlington, Iowa.
Allen, William B., Commercial Traveler, Joseph Dixon Crucible Company, 2003 Builders' Building, Chicago, Illinois.
Allrecht, Winona, Teacher, 1254 Everett Avenue, Louisville, Kentucky.
Alyea, Gertrude, Art Teacher, 1881 Harrison, Muskegon, Michigan.
Anderson, Elizabeth, Art Supervisor, 315 Fifth Street, Geneva, Illinois.
Anderson, Lillian, Assistant Art Supervisor, 3145 Fifth Avenue, South, Minneapolis, Minnesota.
Angell, Rena M., Director of Art, La Crosse State Normal, La Crosse, Wisconsin.
Archer, Gaylord L., Teacher of Manual Arts, 4611 South First Street, Louisville, Kentucky.
Atwood, H. O., Salesman, Eberhard-Faber Pencil Company, 20 North Wacker Drive, Chicago, Illinois.
Atwool, Robert, Teacher, Jefferson Junior High School, Minneapolis, Minnesota.
Auchstetter, Edna, Representative of Prang Company, 2001 Calumet Avenue, Chicago, Illinois.

—B—

Bachus, A. D., Director of Manual Training, 31 Green Street, Newark, New Jersey.
Bailey, Charles H., Head, Department of Arts and Manual Arts, 1113 Walnut Street, Cedar Falls, Iowa.
Bailey, Henry Turner, Director, School of Art, 11441 Juniper Road, Cleveland, Ohio.
Baker, Grace M., Head of Art Department, Colorado State Teachers' College, Greely, Colorado.
Baker, Roma, Supervisor, 811 Lyons Street, Grand Rapids, Michigan.
Baltz, Alta, Art Instructor, Fremont, Nebraska.
Bancroft, Genevieve N., Art Teacher, 320 North Fifteenth Avenue, East, Duluth, Minnesota.
Barber, Laura, Department Art Teacher, 417 Union Street, S. E., Minneapolis, Minnesota.
Barkhurst, H. Lenora, Supervisor of Art, 308 Reserve Avenue, Steubenville, Ohio.
Barkley, Elizabeth M., Art Instructor, 1453 Woodward Avenue, Lakewood, Ohio.
Barlow, W. E., Instructor, 2712 Thirteenth Avenue, South, Minneapolis, Minnesota.

Barnes, R. H., Director Industrial Education, 109 South Woodlawn Avenue, Burlington, Iowa.
Barney, Edgar S., Principal, Hebrew Technical School, 36 Stuyvesant Street, New York, New York.
Barrett, Florine, Art Supervisor, Oak Grove Club, Flint, Michigan.
Barse, Glenn W., Teacher, 5317 First Avenue, South, Minneapolis, Minnesota.
Barstow, Elizabeth, Supervisor of Art, 441 Ludington Avenue, Menomonie, Wisconsin.
Bate, Gladys, Head, Art Department, 327 North Topeka Avenue, Wichita, Kansas.
Baughman, Blanche K., Art Teacher, 2801 Irving Avenue, North, Minneapolis, Minnesota.
Bawden, William T. (Dr.), Editor, Manual Arts Press, Peoria, Illinois.
Beard, Harrington, President, Beard Art Galleries, 66-68 South Tenth Street, Minneapolis, Minnesota.
Beck, Beryl, Substitute, 1207 Harrison, Superior, Wisconsin.
Beck, Frances M., Art Supervisor, 116 Second Street, Jackson, Michigan.
Beck, W. J., American Crayon Company, 157 Oak Street, Hillsdale, Michigan.
Beckwith, Ada B., Supervisor of Art, 1626 Elberson Avenue, East Cleveland, Ohio.
Beeson, Martha, Art Teacher, 3149 Holmes Avenue, Minneapolis, Minnesota.
Bell. Marjorie Y., Art Teacher, 3252 South Fremont Avenue, Minneapolis, Minnesota.
Bellville, Laura M., Art Teacher, 4225 Grove Avenue, Norwood, Ohio.
Benedict, Nina, Head of Art Department, 1340 Third Street, Louisville, Kentucky.
Belz, Meda, Teacher, 901 Farnum, Davenport, Iowa.
Bennett, Charles A., Editor, Industrial Education Magazine, 1711 Columbia Terrace, Peoria, Illinois.
Benton, Mary S., Art Teacher, 614 Dayton Avenue, St. Paul, Minnesota.
Berglund, Hilda, Graduate University of Minnesota, Art Education, 1860 Feronia Avenue, St. Paul, Minnesota.
Bernat, Emile & Sons Company, 89 Bickford Street, Jamaica Plain, Massachusetts.
Beyerstedt, Ella, Supervisor of Art, 204 East Seventh Street, Winona, Minnesota.
Biba, Hermina, Assistant Supervisor of Art, 1715 First Avenue, North, Fort Dodge, Iowa.
Biddle, Adrian L., Educational Representative, American Crayon Company, Sandusky, Ohio.
Bielenberg, Henrietta, 3634 North Avers Avenue, Chicago, Illinois.
Bier, Anna, Supervisor of Art, 214 East Fourth Street, Greenville, Ohio.
Billmeyer, Lela Ann, Art Supervisor, State Teachers' College, Valley City, North Dakota.
Bireline, Rosalia, Art Teacher, 2742 Hennepin Avenue, Minneapolis, Minnesota.
Birkeland, Birdeen, Printing and Mechanical Drawing Teacher, 4045 Forty-fourth Avenue, South, Minneapolis, Minnesota.
Bischoff, Frieda, Teacher, 2173 Lowell Avenue, Louisville, Kentucky.
Bittaker, Agnes, Design-Jewelry Instructor, Wheeling High School, Wheeling, West Virginia.
Bjornstad, Janet M., Nebraska Teachers' College, Wayne, Nebraska.
Blanchard, Emma, Art Director, St. Angelus Hotel, San Angelo, Texas.
Blankmeyer, Ruth M., Supervisor of Art, 960 North Boulevard, Oak Park, Illinois.
Blatchley, Marjorie Dale, Art Teacher, Fort Scott, Kansas.
Bloom, Miss Daisy E., Art Teacher, 1300 Everett Avenue, Louisville, Kentucky.
Boebinger, Charles W., Head of Art Department, Ohio Mechanics Institute, Cincinnati, Ohio.
Boetje, Mary Louise, Supervisor of Art, 1006 Dayton Street, Sioux City, Iowa.
Bond, Orma L., Substitute Art Teacher, 4306 Linden Hills Boulevard, Minneapolis, Minnesota.

Botten, Lou Mae, Teacher, 955 Spruce Street, Dubuque, Iowa.
Boudreau, James C., Director of Art, Pratt Institute, Brooklyn, New York.
Bowman, Elsie L., Director of Art, Kansas State Teachers' College, 1606 South Walnut Street, Pittsburg, Kansas.
Bradway, Blanche L., Instructor, Hibbard Junior High School, Chicago, Illinois.
Braman, V. E., General Supervisor, City Schools, Superior, Wisconsin.
Brockway, Helen M., Art Teacher, 1103 Fifth Street, S. E., Minneapolis, Minnesota.
Brooks, Edwin R., Devoe & Raynolds Company, 106 Salem Avenue, Dayton, Ohio.
Brooke, Cora W., Art Teacher, 1070 Fair Avenue, Columbus, Ohio.
Brom, Roman T., Teacher, 1237 South Brook Street, Louisville, Kentucky.
Bros, Ethelyn J., (Mrs.), Art Teacher, 5325 Humboldt Avenue, South, Minneapolis, Minnesota.
Brown, Clara G., Art Supervisor, 1318 Sixth Avenue, Huntington, West Virginia.
Brown, Mrs. R. R. J., Supervisor of Drawing, 287 Niagara Street, Winnipeg, Manitoba, Canada.
Brownson, Mary, Supervisor of Art, City Schools, Dubuque, Iowa.
Bruce, Rena J., Teacher, Curtis Hotel, Minneapolis, Minnesota.
Bruener, Rose, Art Teacher, Edina School, 50th and Wooddale Streets, Minneapolis, Minnesota.
Brusselbach, Alberta, Teacher, 1406 Highland Avenue, Louisville, Kentucky.
Bryan, Mrs. Lillian T., Art Director, C. Y. Apartments, No. 15, Casper, Wyoming.
Buck, Irene, Supervisor of Art, City Schools, 202 North Pinckney Street, Madison, Wisconsin.
Buckley, Alice J., Executive Secretary-Treasurer, National Poster Art Alliance, Inc., 65 East Fifty-sixth Street, New York City, New York.
Budge, Bernice E., Art Teacher, 1907 East Third Street, Duluth, Minnesota.
Buehler, Anna, Art Teacher, 434 N. E. Main Street, Minneapolis, Minnesota.
Burdette, Sally S., Teacher of Math and Art, 1215 South Fourth Street, Louisville, Kentucky.
Buren, Dorothy, Art Teacher, Plaza Hotel, Colorado Springs, Colorado.
Burling, B. B., Head of Electrical Work, Boys' Technical High School, 345 Virginia Street, Milwaukee, Wisconsin.
Busack, Grace C., Art Teacher, 3241 Portland Avenue, Minneapolis, Minnesota.
Bush, E. E., Mentzer, Bush & Company, 2210 South Parke Avenue, Chicago, Illinois.

— C —

Cable, Rena Nancy, Art Teacher, Garfield Junior High School, P. O. Box 827, Akron, Ohio.
Cahill, Alice M., Teacher of Commercial Art, 827 South Fifth Street, Louisville, Kentucky.
Cahoon, Blanche M., Director of Art, Public Schools, 1002 South Boston Street, Apartment E, Tulsa, Oklahoma.
Calkins, Charlotte W., Supervisor of Fine Arts and Practical Arts, 223 Lafayette Avenue, N. E., Grand Rapids, Michigan.
Caldwell, Ada, Head, Art Department, State College, Brookins, South Dakota.
Campbell, Mrs. Donald, Assistant Art Supervisor, 2212 Felix Street, St. Joseph, Missouri.
Cane, Alice, Head, Art Department, 6 Ormsby Court, Louisville, Kentucky.
Cantieny, Josephine, Teacher, 5124 Nicollet Avenue, Minneapolis, Minnesota.
Cantrall, Harriet M., Supervisor of Drawing, Public Schools, 853 Grand Boulevard, Springfield, Illinois.
Capdevila, Marie, Professor Normal School, G. esg. 25, Hotel Palace, Vedado, Havana, Cuba.
Cardwell, Katherine, Art Instructor, 906 East Armour Street, Kansas City, Missouri.

Carlson, G. W., Teacher, 4921 Pennsylvania Avenue, South, Minneapolis, Minnesota.
Carey, Mary R., Teacher, 2613 West Main Street, Louisville, Kentucky.
Carlson, William V., Printing Teacher, Jordan Junior High School, Minneapolis, Minnesota.
Carlsten, Edna, Art Instructor, State Normal Schools, Stevens Point, Wisconsin.
Carpenter, Verna L., Classroom Teacher of Art, 3711 Pillsbury Avenue, Minneapolis, Minnesota.
Carroll, Marion, Art Teacher, Manual Training High School, 248 West Sixty-second Street, Kansas City, Missouri.
Carroll, Myrtle, Special Art Teacher, 656 North Fifty-eighth Street, Omaha, Nebraska.
Carson, Lillian, Teacher, Stout Institute, Terre Apartments, Menomonie, Wisconsin.
Carter, Carl T., Director of Manual Arts, Board of Education, Toledo, Ohio.
Carter, Howard G., Supervisor of Manual Arts, 757 Park Avenue, Hamilton, Ohio.
Cassidy, Blanche, Director of Art, Public Schools, 2255 McFadden Street, Beaumont, Texas.
Cates, Adeline, Supervisor of Art, 703 West Main Street, Muncie, Indiana.
Cawthor, Mary Gale, Assistant Supervisor of Industrial Education, 2015 Bonny Castle Avenue, Louisville, Kentucky.
Caya, O. Howard, Head of Art Department, Glendale Junior College, Glendale, California.
Chambers, Ida N., Teacher of Art, University of Arkansas, Fayetteville, Arkansas.
Chapman, Madge, Art Teacher, 4045 Oakland Avenue, Minneapolis, Minnesota.
Cheney, Mary Moulton, Teacher of Art, Girls' Vocational High School, Minneapolis, Minnesota.
Childs, Helen G., Art Teacher, Arrowhead Hotel, Duluth, Minnesota.
Christian, Mary C. (Mrs.) Art Director, 49 Seneca Street, Pontiac, Michigan.
Christy, Elmer W., Director of Industrial Arts, Board of Education, Denton Building, Cincinnati, Ohio.
Clark, Dorothy, Teacher, 127 West Broadway, Winona, Minnesota.
Clark, Florence E., Grade Teacher, 2841 Brattleboro Avenue, Des Moines, Iowa.
Clark, Hazel B., Art Teacher, 1125 West High Street, Springfield, Ohio.
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